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Leak detectors

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

Leak detectors

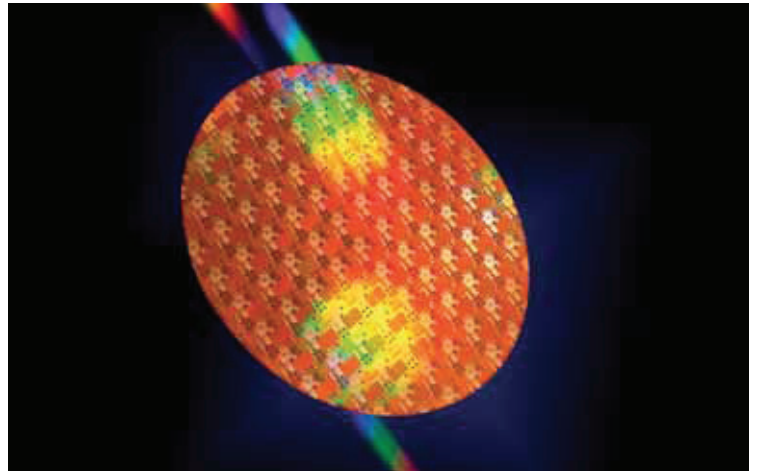


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Leak detectors

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.

These multipurpose leak detectors are used mainly for stationary applications to localize leaks and to check leak tightness. They are also movable thanks to a dedicated cart. Compact helium leak detectors are used in a wide range of industries, from heavy industry right up to clean room applications. In this latter case, the dry versions of the leak detector are used.

High-performance leak detectors are used where extremely short cycle times and fast reduction of helium background 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

Workstation:

- Ideal for tests in mass production with short cycle times
- Fully automatic operation on sealed components
- Ergonomic design and operation for seated operators

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 accurately locating minor leaks
- Status messages by voice synthesizer for the user's convenience
- Remote controlled for comfortable operation



Series at a glance

Portable



MiniTest 300



ASM 310

Multipurpose



ASM 340
ASM 340 D

High-performance – mobile



ASM 380

High-performance – compact



ASM 182 T
ASM 182 TD+

High-performance – console



ASM 192 T
ASM 192 T2D+

Workstation



ASM 1002

Modular



ASI 30

Sniffing

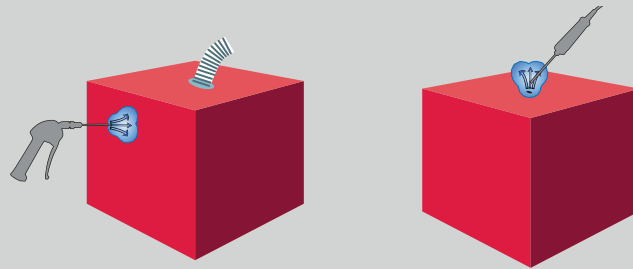


ASM 102 S

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.

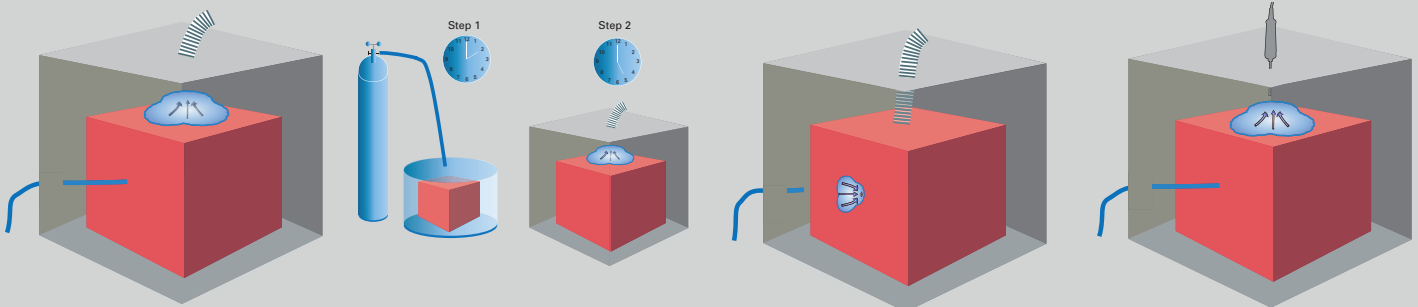
Customer benefits

- 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 atmospheric pressure
MiniTest	■					
ASM 310	■	■				
ASM 340 /340 D	■	■	■		■	■
ASM 380	■	■	■		■	■
ASM 182 T / TD+	■	■	■	■	■	■
ASM 192 T / T2D+	■	■	■	■	■	■
ASM 1002	■	■	■	■	■	■
ASI 30		■	■		■	■
ASM 102 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 to 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 – MiniTest 300

Portable helium leak detector for industrial use

Innovative technology and low weight

The MiniTest 300 helium leak detector weighs only a sensational 5 kg. It is the first vacuum leak detector on the market which works with a quartz window sensor. Thanks to this innovative technology, it stands out due to its lightweight design and small footprint.

The uncomplicated operation and an optional wireless remote control enable helium leak detection to be carried out even in large systems by only one person.

The MiniTest 300 can work at a high inlet pressure of up to 200 hPa and is not sensitive to water vapor. This makes it the ideal solution for leak detection in power plants, vacuum furnaces and vacuum systems as well as in heat exchangers.

The data recording function on the remote control via USB interface makes this unit a user-friendly data logger. Since it is practically maintenance-free, it is also cost-efficient both in operation and in long-term use.

Remote control RC 500 WL

All functions of the helium leak detector can be controlled from a distance of up to 100 m. The measured data can be easily read on the 3.5 inch touchscreen display and saved in the remote control



Remote control RC 500 WL

Customer benefits

- Vacuum leak detection with a quartz window sensor for localizing and quantifying even the small leaks
- Compact size and lightweight (5 kg) -Ideal for servicing work
- Wireless remote control with extensive range and memory
- Easy touchscreen operation with intuitive menu navigation
- Graphic display
- Direct connection possible to systems with a maximum working pressure of up to 200 hPa
- Leaks of up to $5 \cdot 10^{-8}$ Pa m³/s detectable at a pumping speed of 1 l/s
- Low maintenance costs



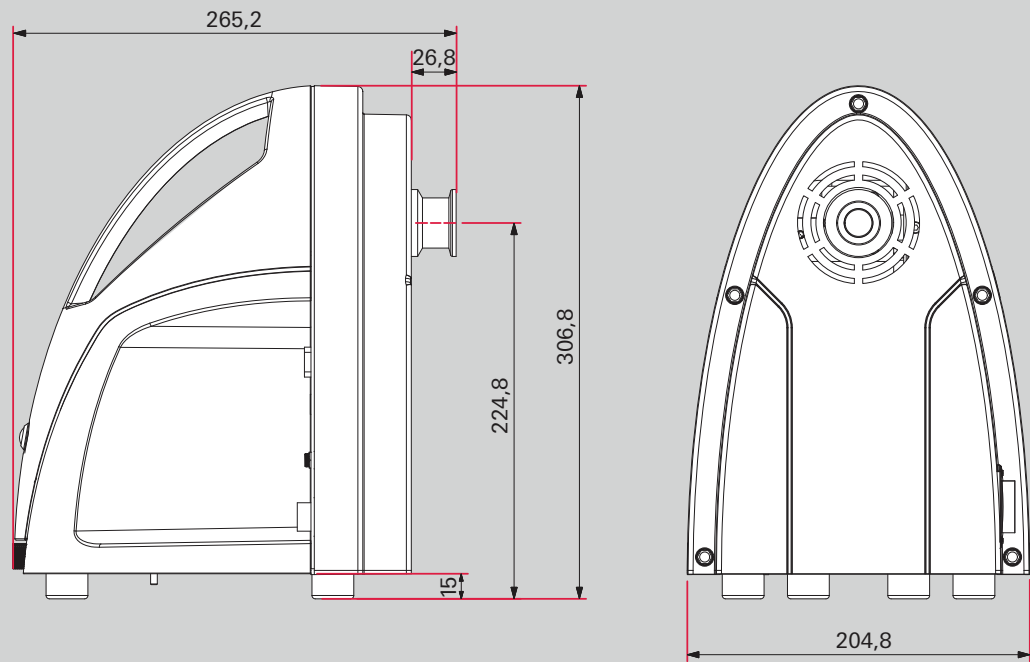
Applications

- Vacuum furnaces
- Lamp manufacturing
- Vacuum coating systems
- Air-conditioning and refrigeration
- Pharmaceuticals
- Power engineering
- Chemistry

Portable – MiniTest 300

The portable helium leak detector for industrial use

Dimensions



Dimensions in mm

Technical data

	MiniTest 300
Flange (in)	DN 25 KF
Sound pressure level	< 70 dB (A)
Power consumption	max. 30 W
Power input	max. 2 A
Installation altitude, max.	2,000 m
Cold start to ready	30 min
Inlet pressure max.	200 hPa absolute
Weight	5 kg
Smallest detectable leak rate for ^4He (to AVS 2.1)	$5 \cdot 10^{-8} \text{ Pa m}^3/\text{s}^{1)}$
Interfaces	RS-485, gauge, remote control, radio transmitter, I/O D-Sub 9
Operating temperature:	+10 to +35 °C
Storage temperature:	-10 to +55 °C
Power supply	100-240 V, 50/60 Hz
Backing pump	none

¹⁾ at a pumping speed of the system pump of $S = 1 \text{ l/s}$

Order numbers

	Order number
MiniTest 300	PT L03 000

Order numbers accessories

Accessories	Order number
Remote control RC 500 WL, wireless	PT 445 420-T
Remote control RC 500	PT 445 421-T
Test leak in pin-type casing with adapter DN 16 ISO-KF	
Leakrate $3 \cdot 10^{-3} \text{ Pa m}^3/\text{s}$	PT 445 425
Leakrate $3 \cdot 10^{-4} \text{ Pa m}^3/\text{s}$	PT 445 426
Leakrate $3 \cdot 10^{-5} \text{ Pa m}^3/\text{s}$	PT 445 427
Transport case	PT 445 428
Extension cable	PT 445 402
Helium spray gun	BG 512 125 -T
Centering ring with poral filter	PF 117 225 -T

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.

Compatible

The ASM 310 can likewise be operated with the wireless remote control RC 500 WL. This enables the leak detector to be operated even from a distance of up to 100 meters.



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



Remote control RC 500 WL

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



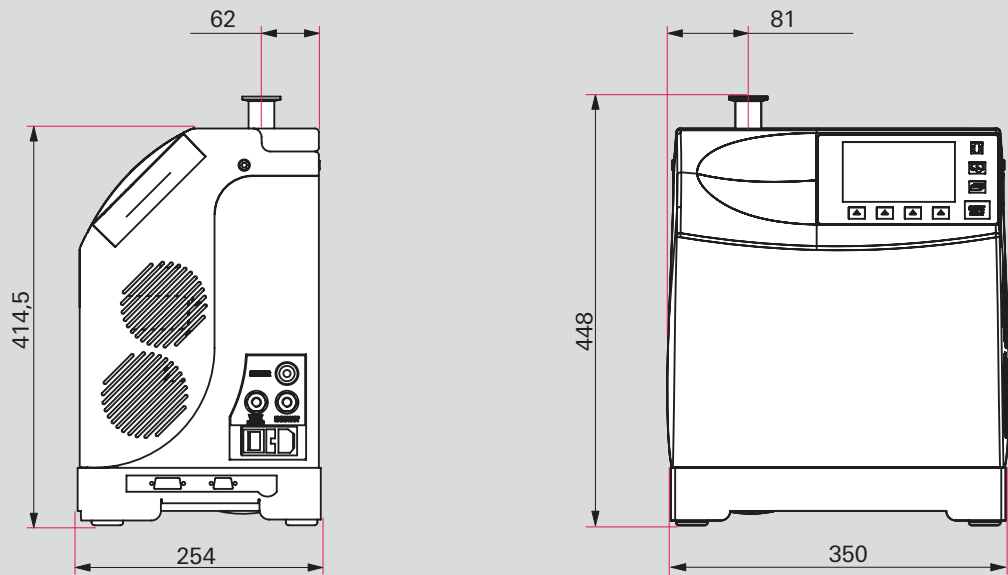
Applications

- 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	⁴ He, ³ He, 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	100-240 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 500 WL, wireless	PT 445 432-T
Trolley	114820
Transportation case	119594

General accessories for our leak detectors will be found on page 46.

Multipurpose – ASM 340, ASM 340 D

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

Top performance

The new 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 m³/s min.
detectable leak rate for He

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.

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



Remote control RC 500 WL



Sniffer probe LP 505

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 m³/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



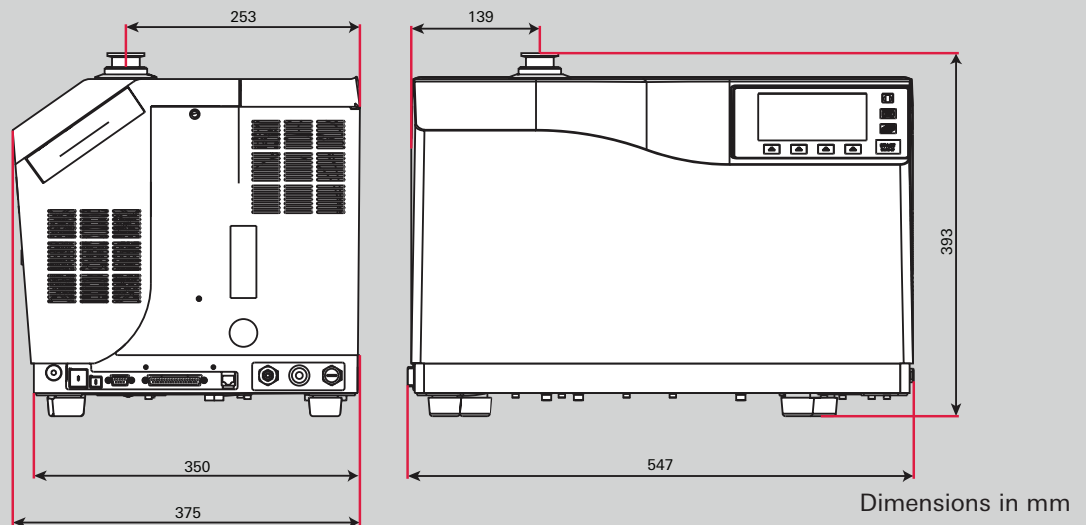
Applications

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

Multipurpose – ASM 340, ASM 340 D

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

Dimensions



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)	$5 \cdot 10^{-10} \text{ Pa m}^3/\text{s}$
Minimum detectable leak rate for He (Vacuum leak detection)	$< 5 \cdot 10^{-13} \text{ Pa m}^3/\text{s}$
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)
Backing pump	Rotary vane pump	Diaphragm pump
Backing pump capacity	15 m ³ /h	3.4 m ³ /h
Power consumption max.	850 W	600 W
Supply	90–130 V, 50/60 Hz 200–240 V, 50/60 Hz	Universal 90–240 V, 50/60 Hz
Weight	56 kg	45 kg
Operating temperature	0–45°C (vacuum) 0–40°C (sniffing)	0–35°C

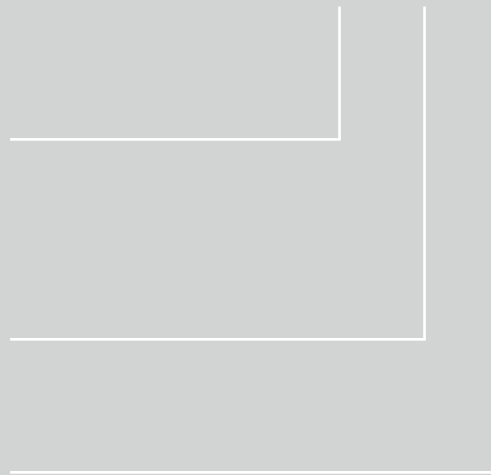
**Order number matrix
ASM 340**

Interface board		a
Basic 15 pins I/O		0
Basic 15 pins I/O + Bluetooth		1
37 pins I/O		2
37 pins I/O + Wifi		3
37 pins I/O + Ethernet		4
37 pins I/O + Bluetooth		5

Supply		b
90/130 V, 50/60 Hz, US Power cable		L
200/240 V, 50/60 Hz, EU Power cable		H

Personalization		c
No		A
Japan		B

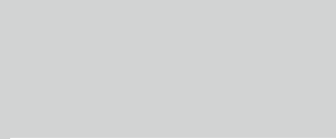
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**Order number matrix
ASM 340 D (dry version)**

Interface board		a
Basic 15 pins I/O		0
Basic 15 pins I/O + Bluetooth		1
37 pins I/O		2
37 pins I/O + Wifi		3
37 pins I/O + Ethernet		4
37 pins I/O + Bluetooth		5

Order number
K S B A 0 0 A a M M 9 A



Order number accessories

Accessories	Order number
Country-specific power cable	
UK	104411
Italy	104758
Switzerland	103718
Remote control, 5 m cable	
Leak rate in mbar l/s, front panel in English	106688
Leak rate in Pa m ³ /s, front panel in English	108880
Wireless remote control	
RC 500 WL	PT 445 432-T
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	
With European cable	PT 445 411-T
With US cable	PT 445 413-T
Interface	
Profibus	121645

High performance – mobile – ASM 380

Mobile unit optimized for rapid pump down and short response times on large test objects

Dry and mobile

Our ASM 380 high-performance leak detector is fitted with an ACP 40 dry backing pump combined with a powerful high vacuum pump. This makes it the ideal solution for maximum testing sensitivity in analytics, laboratories, the solar panel industry and the semiconductor industry. With the ASM 380, you will achieve extremely short pump down times even where large volumes are involved. The slim design and compact size set up on a cart with large wheels and a low center of gravity make this leak detector mobile and safe to handle.

User-friendly

The ASM 380 with its low noise level of only 53 dB(A) is unusually quiet for a leak detector of its class. The color display panel with full 360° viewing can be read from any position. This display is also detachable and can be positioned where the user can see it using four strong magnetic clips. An integrated SD memory card makes it easy to save test data and settings parameters. The ASM 380 has an integrated lockable toolbox for tools, spare parts and accessories. Thanks to its convenient bottle-holder, it is even possible to attach and carry a tracer gas bottle.

Compatible

The ASM 380 can likewise be operated with the wireless remote control RC 500 WL. This enables the leak detector to be operated even from a distance of up to 100 meters.



Remote control RC 500 WL

Customer benefits

- Performance, sensitivity and mobility in the smallest footprint
- High roughing capacity using particle-free, clean and dry ACP pump
- Clean room compatible
- High crossover pressure for a rapid entry into measurement mode
- Optional communication interfaces
- Color touch display with full 360° viewing offering excellent visibility
- Intuitive menus, easy to navigate and available in 9 languages



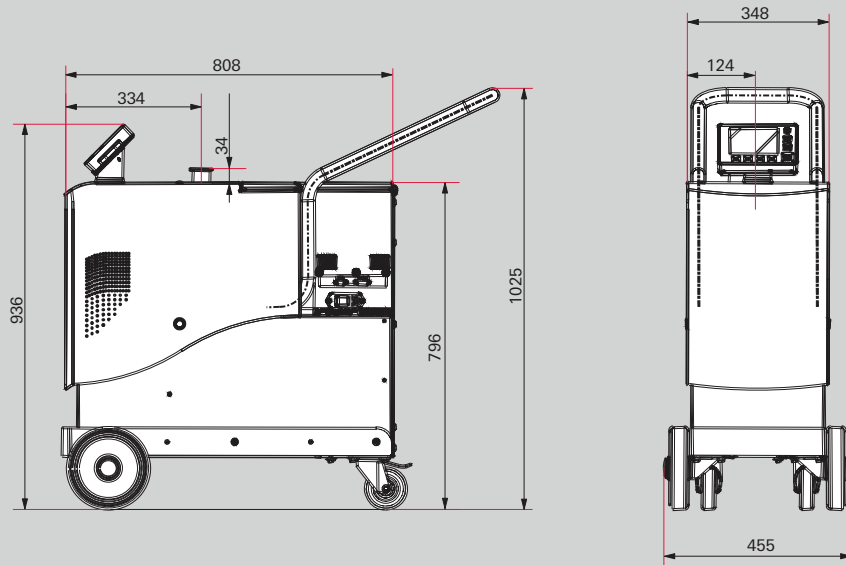
Applications

- 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 380

Mobile unit optimized for rapid pump down and short response times on large test objects

Dimensions



Dimensions in mm

Technical data

	ASM 380
Flange (in)	DN 40 ISO-KF
Test methods	Vacuum and sniffing leak detection
Detectable gases	^4He , ^3He , H_2
Minimum detectable leak rate for He (sniffer leak detection)	$1 \cdot 10^{-8} \text{ Pa m}^3/\text{s}$
Minimum detectable leak rate for He (vacuum leak detection)	$5 \cdot 10^{-13} \text{ Pa m}^3/\text{s}$
Pumping speed for He	7 l/s
Noise level	53 dB (A)
Supply	90-240 V, 50/60 Hz
Power consumption max.	1,500 W
Power consumption	700 W
Maximum inlet test pressure	15 hPa
Start-up time (20 °C) without calibration	< 4.5 min
Start-up time (20 °C) with calibration	< 5.5 min
I/O interfaces	1 digital input (start cycle); 2 digital outputs (test mode ok, helium signal above reject setpoint); 3 analog outputs (configurable: helium signal log, mantissa, exponent, inlet pressure)
Interface	RS-232
Operating temperature	10 – 35 °C
Backing capacity	35 m^3/h
Weight	110 kg

Order numbers

Leak detector	Order number
ASM 380, universal voltage	PSGB00E0MM9A
ASM 380, universal voltage, integrated Bluetooth	PSGB00E1MM9A
ASM 380, universal voltage, configurable I/O interface board	PSGB00E2MM9A
ASM 380, universal voltage, configurable I/O interface board, integrated WiFi	PSGB00E3MM9A
ASM 380, universal voltage, configurable I/O interface board, Ethernet	PSGB00E4MM9A
ASM 380, universal voltage, configurable I/O interface board, integrated Bluetooth	PSGB00E5MM9A

Order numbers for accessories

Accessories	Order number
Bottle holder for ASM 380	118444
Inlet filter, 20 µm, DN 40/40 ISO-KF	105842
Remote control RC 500 WL, wireless	PT 445 432-T
Locking clamp, DN 40 KF	118801

General accessories for our leak detectors can be found on page 46.

High performance – compact – ASM 182 T, ASM 182 TD+

The perfect combination of high performance and easy operation for exceptional reliability even in the harshest industrial applications

Powerful and compact

The high-performance compact leak detectors in the ASM 182 series are available in oil-lubricated and dry versions. Both versions are equipped with a high backing capacity. The small footprint of these leak detectors enables them to be easily integrated into production lines. Our powerful ASM 182 can be used for leak detection on parts of the most varied sizes and volumes. Whether used in the automotive industry, the aeronautic and aerospace or in semiconductor industry, these leak detectors fit the bill with their high performance and reliability.

Oil sealed version: ASM 182 T

The ASM 182 T leak detector has a rotary vane pump with a pumping speed of 20 m³/h. This large backing pump, together with a powerful turbopump, enables the ASM 182 T to achieve the fastest cycle times in its performance class. It is most impressive when large volume test parts are concerned. Thanks to the fold-out feature of the front and rear housing sides the leak detector can be easily maintained.

Dry version: ASM 182 TD+

The dry ASM 182 TD+ combines a particle-free backing pump with extreme long-term stability and a pumping speed of 25 m³/h, a molecular pump for high pumping speed in the medium vacuum range and a powerful turbopump in the high vacuum range. The test pressure is attained rapidly for large or strongly outgassing test objects. Thanks to ultra-small background signals, the ASM 182 TD+ reliably performs even in the most demanding environments.

Customer benefits ASM 182 T

- Short cycle times thanks to the largest backing pump in its class
- Low helium background even with large test parts
- Ease of service thanks to the fold-out feature of the front and rear housing sides

Customer benefits ASM 182 TD+

- The test pressure is attained rapidly even with large or strongly outgassing test specimens.
- Short response times and test cycles thanks to high helium pumping speed
- Ultra-small background signals and rapid signal reduction – for demanding test jobs



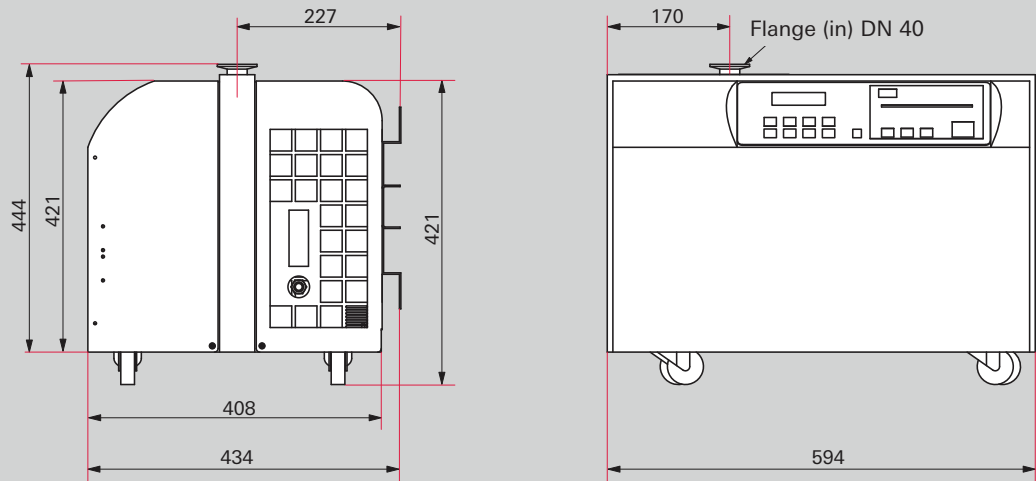
Applications

- Leak detection systems
- Automotive
- Aeronautic and aerospace industry
- Laser technology
- Sensors
- Vacuum components – feedthroughs, valves, bellows, expansion joints
- Electronics
- Mechanical components for petrochemistry
- Heat exchangers

High performance – compact – ASM 182 T, ASM 182 TD+

The perfect combination of high performance and easy operation for exceptional reliability even in the harshest industrial applications

Dimensions



Dimensions in mm

Technical data

	ASM 182 T	ASM 182 TD+
Flange (in)	DN 40 ISO-KF	DN 40 ISO-KF
Test methods	Vacuum and sniffing leak detection	Vacuum and sniffing leak detection
Detectable gases	^4He	^4He
Minimum detectable leak rate for He (sniffing leak detection)	$1 \cdot 10^{-8} \text{ Pa m}^3/\text{s}$	$1 \cdot 10^{-8} \text{ Pa m}^3/\text{s}$
Minimum detectable leak rate for He (vacuum leak detection)	$5 \cdot 10^{-13} \text{ Pa m}^3/\text{s}$	$5 \cdot 10^{-13} \text{ Pa m}^3/\text{s}$
Pumping speed for He	4.4 l/s	4.4 l/s
Noise level	54 dB (A)	65 dB (A)
Supply	200-240 V, 50/60 Hz	200-240 V, 50/60 Hz
Power consumption max.	1,000 W	1,500 W
Maximum inlet test pressure	6 hPa	6 hPa
Backing pump capacity	20 m ³ /h	25 m ³ /h
Start-up time (20 °C) without calibration	3 min	< 4 min
Start-up time (20 °C) with calibration	4.5 min	< 5.5 min
I/O interfaces	Digital inputs (start, vent, calibration...); digital outputs (test modes, cycle in progress, helium signal above reject setpoint ...); analog outputs (helium signal log, inlet pressure)	Digital inputs (start, vent, calibration...); digital outputs (test modes, cycle in progress, helium signal above reject setpoint ...); analog outputs (helium signal log, inlet pressure)
Interface	RS-232	RS-232
Operating temperature	10 – 40 °C	10 – 40 °C
Weight	76 kg	88 kg

Order number matrix
ASM 182 T, ASM 182 TD+

Order number
a b c d e f g h i j 0

Leak detector	a
ASM 182 T	D2
ASM 182 TD+ without cart	D1
ASM 182 TD+ with cart	D7

Detectable gases	b
Helium (⁴ He)	0
3 masses (⁴ He, ³ He, H ₂)	3

Seals for vacuum module and analyzer cell	c
Elastomer	R
Metal	M

Control panel	d
Standard	S
Graphic color touchscreen	T

Detection option	e
ASM 182 T (not available)	0
ASM 182 TD+ standard	S
ASM 182 TD+ with gas line option	G

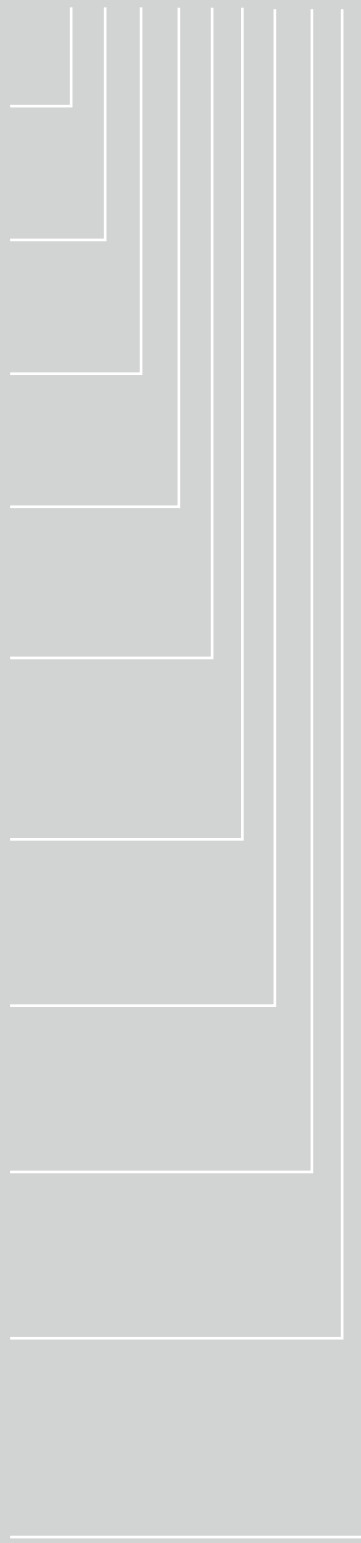
Test chamber	f
none	0
Small test chamber	1
Medium test chamber	2
Large test chamber	3

Cover	g
Painted	P
UCT (stainless steel covers and frame), only for ASM 182 TD+	C

Language	e
French	A
English	B
German	C
Japanese	E

Supply	f
100-130 V, 50/60 Hz	7
220-240 V, 50/60 Hz	8

Cable and plug type	g
USA	1
France/Germany	2
UK	3
Italy	4
Switzerland	5
Without plug	7



High performance – console – ASM 192 T, ASM 192 T2D+

**Ultra sensitive detection limits on large-volume components,
ergonomic unit for standing operators**

Ergonomic console units

High-performance leak detectors in the ASM 192 series provide high reliability even in harsh environments. The console units have an ergonomic work height for standing operators and the remote control is fixed to a freely movable arm for convenient use. The work surface is grounded and provides a generous surface for placing large test objects, useful small parts and installation components on.

These console leak detectors benefit of an easy menu navigation combined with a voice synthesizer for delivering important status messages. As with all other Pfeiffer Vacuum leak detectors, the ASM 192 series can be controlled using a personal computer and measuring data can be documented – console units, in fact, provide as well a work surface for a laptop.

Most sensitive detection limits on large-volume components

Extremely short pump down times even of large chambers as well as ultra short cycle times are the outstanding features of these console units. The vacuum system incorporating a powerful high vacuum pump reduces helium background fast and makes for short recovery times even after big leaks.

With one or two backing pumps operating in parallel, system configurations can be ideally adapted to meet any production throughput requirements. For the ASM 192 series, too, there are oil-lubricated rotary vane pumps as well as dry ACP pumps available for use as backing pumps.

Customer benefits

- Ideal for industrial applications
- Robust and reliable in the harshest environments
- Fast response time thanks to very high helium pumping speed
- Various languages and operating voltages available for global use
- Graphic color touchscreen
- Test chambers can be mounted on the inlet flange



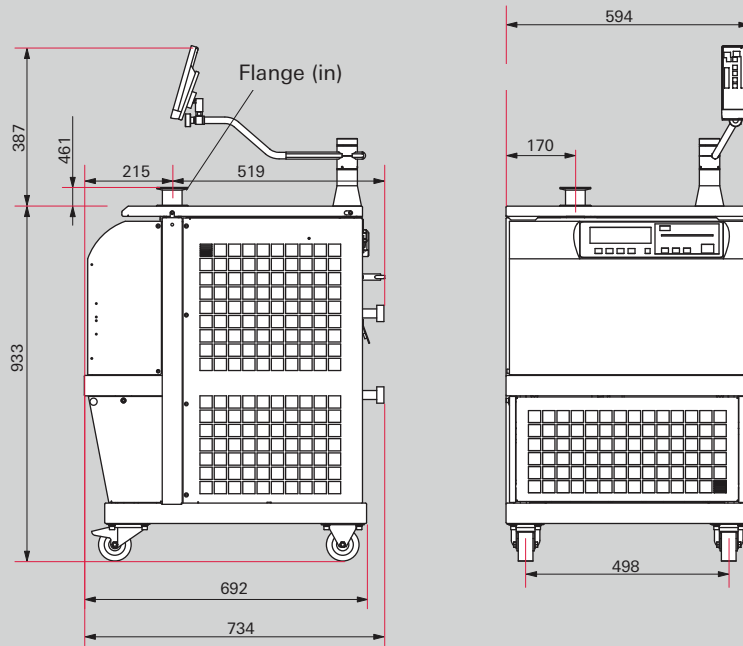
Applications

- Laser technology
- Aeronautics and aerospace
- Space simulation
- Electronics
- Nuclear technology
- Medical technology
- Accelerators
- Semiconductor technology
- R & D
- Coating
- Vacuum technology, large chambers

High performance – console – ASM 192 T, ASM 192 T2D+

Ultra sensitive detection limits on large-volume components,
ergonomic unit for standing operators

Dimensions



Dimensions in mm

Technical data

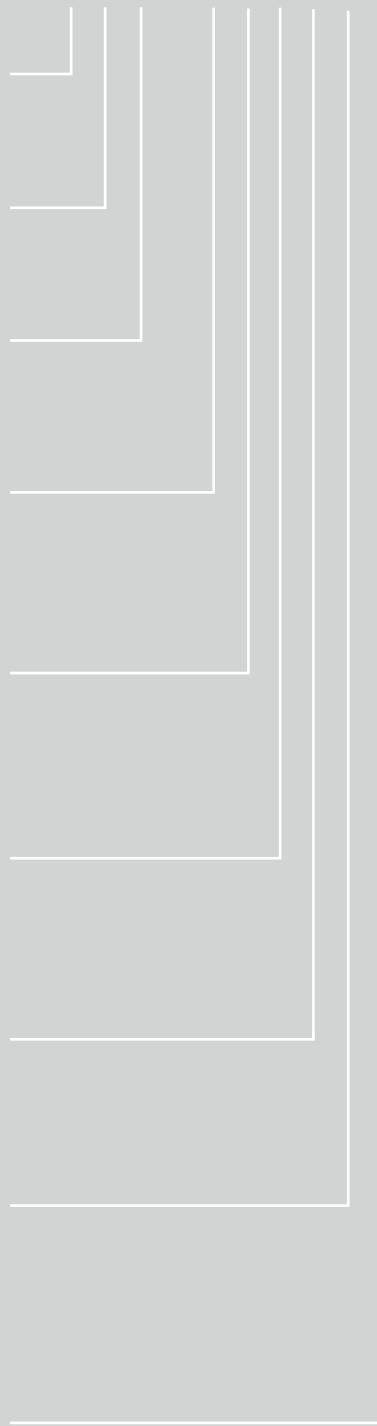
	ASM 192 T	ASM 192 T2D+
Flange (in)	DN 40 ISO-KF	DN 50 ISO-KF
Test methods	Vacuum and sniffing leak detection	Vacuum and sniffing leak detection
Detectable gases	^4He	^4He
Minimum detectable leak rate for He (sniffing leak detection)	$1 \cdot 10^{-8} \text{ Pa m}^3/\text{s}$	$1 \cdot 10^{-8} \text{ Pa m}^3/\text{s}$
Minimum detectable leak rate for He (vacuum leak detection)	$5 \cdot 10^{-13} \text{ Pa m}^3/\text{s}$	$5 \cdot 10^{-13} \text{ Pa m}^3/\text{s}$
Pumping speed for He	4.4 l/s	20 l/s
Noise level	54 dB (A)	66 dB (A)
Supply	200-240 V, 50/60 Hz	200-240 V, 50/60 Hz
Power consumption max.	1,300 W	1,000 W
Maximum inlet test pressure	6 hPa	30 hPa
Backing capacity	20 m ³ /h	25 m ³ /h
Start-up time (20°C) without calibration	3 min	3.5 min
Start-up time (20°C) with calibration	4.5 min	5 min
I/O interfaces	Digital inputs (start, vent, calibration...); digital outputs (test modes, cycle in progress, helium signal above reject setpoint...); analog outputs (helium signal log, inlet pressure)	Digital inputs (start, vent, calibration...); digital outputs (test modes, cycle in progress, helium signal above reject setpoint...); analog outputs (helium signal log, inlet pressure)
Interface	RS-232	RS-232
Operating temperature	10 – 40 °C	10 – 40 °C
Weight	125 kg	157 kg

Order number matrix
ASM 192 T, ASM 192 T2D+

Order number

a b c 0 d e f g h i 0

Leak detector		a
ASM 192 T		D4
ASM 192 T2D+		D3
Detectable gases		b
Helium (⁴ He)		0
3 masses (⁴ He, ³ He, H ₂)		3
Seals for vacuum module and analyzer cell		c
Elastomer		R
Metal		M
Backing pump		d
One backing pump (ASM 192 T: 20 m ³ /h, ASM 192 T2D+: 25 m ³ /h)		S
ASM 192 T – two backing pumps: 40 m ³ /h		R
ASM 192 T2D+ – two backing pumps: 50 m ³ /h		T
Test chamber		e
None		0
Small test chamber		1
Medium test chamber		2
Large test chamber		3
Measuring units		f
mbar l/s		M
Torr l/s		T
Pa m ³ /s		P
Language		g
French		A
English		B
German		C
Japanese		E
Supply		h
100-130 V, 50/60 Hz ¹⁾		7
220-240 V, 50/60 Hz		8
Cable and plug type		i
USA 15 A		1
France/Germany		2
UK		3
Italy		4
Switzerland		5
Without plug		7
USA 30 A ²⁾		8



¹⁾ not below 110 V for operation with two backing pumps

²⁾ If the voltage is lower than 110 V

Workstation - ASM 1002

For leak testing of various objects where high production throughput is required

Dedicated to mass production applications

Leak detection workstations are used when extremely short cycle times and fast reduction of helium background are required. These leak detectors were developed for leakage testing of open or sealed components in mass production.

Powerful

The ASM 1002 leak detector combines high performance with user-friendliness. The vacuum system provides a backing capacity up to 50 m³/h and guarantees fast reduction of helium background between measurements. These performance characteristics along with its reliability and long-term stability make the ASM 1002 the ideal solution for even the most demanding applications such as leak testing of pacemakers.

User-friendly

The ergonomic design of the ASM 1002 provides ideal conditions for seated operators. The unit's software supports the user during testing of sealed components after a bombing test as well as during leakage testing of open parts. Clear optical and acoustic displays make for easy and reliable operation of the workstation by experienced and semi-skilled users alike.

Adaptable

The ASM 1002 enables automatic leak detection to be carried out on sealed components. By closing the test chambers, the test procedure starts and a red / green light indicates the test result at the end. If necessary, the test chambers can simply be exchanged for a standard vacuum flange or a part-specific holding fixture. This allows the same leak detector to be used for testing open parts, too.

Customer benefits

- Short time to test thanks to powerful pumping package: one or two rotary vane pumps (25 or 50 m³/h) to evacuate the test object and one rotary vane pump (20 m³/h) as fore pump for the high-vacuum pump
- The fastest unit of its category: less than 5 seconds to achieve 1 · 10⁻¹⁰ Pa m³/s in mass production
- Unique ergonomics for operator's comfort
- Two test methods: Standard test or special Pass/Fail menu for semi-automatic testing with high throughput
- Rugged and highly reliable unit to meet high volume production needs
- Low maintenance



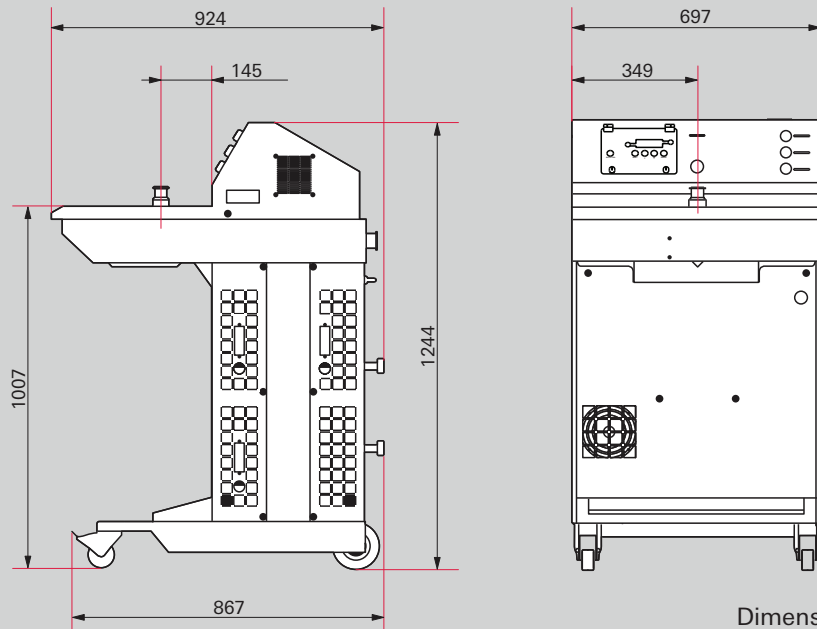
Applications

- Electronic components
- Medical technology
- Pharmaceuticals
- Food technology
- Lamp technology
- Vacuum technology, large components

Workstation – ASM 1002

For leak testing of various objects where high production throughput is required

Dimensions



Dimensions in mm

Technical data

ASM 1002

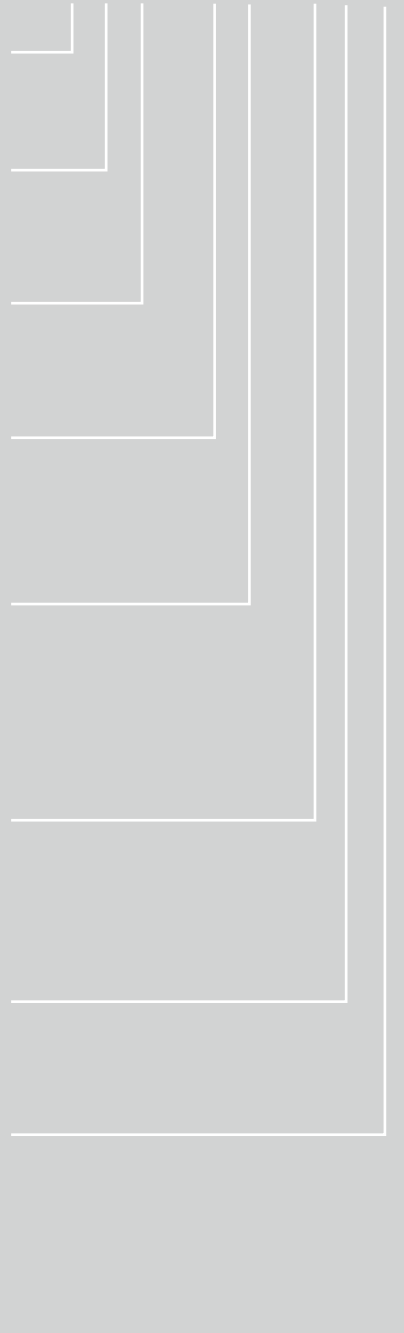
Flange (in)	DN 25 ISO-KF
Test methods	Vacuum and sniffing leak detection
Detectable gases	^4He
Minimum detectable leak rate for He (sniffing leak detection)	$1 \cdot 10^{-8} \text{ Pa m}^3/\text{s}$
Minimum detectable leak rate for He (vacuum leak detection)	$1 \cdot 10^{-12} \text{ Pa m}^3/\text{s}$
Pumping speed for He	4 l/s
Noise level	55 dB (A)
Backing capacity	25 m^3/h
Supply	110-130 / 200-240 V, 50/60 Hz
Power consumption	< 1,500 W
Power consumption max.	2,300 W
Maximum inlet test pressure	100 hPa
Start-up time (20°C) without calibration	< 3.5 min
Start-up time (20°C) with calibration	< 4.5 min
I/O interfaces	Analog outputs (helium signal log, inlet pressure); special analog outputs for returning the light status in pass/fail mode
Interface	RS-232
Operating temperature	10 – 40 °C
Weight	190 kg

**Order number matrix
ASM 1002**

Order number

a b c 0 d e 0 f g h i 0

Leak detector	a
ASM 1002	Y
Detectable gases	b
Helium (⁴ He)	0
3 masses (⁴ He, ³ He, H ₂)	3
Seals for vacuum module and analyzer cell	c
Elastomer	R
Metal	M
Backing pump	d
One backing pump, 25 m ³ /h	S
Two backing pumps, 50 m ³ /h	T
Test chamber	e
Inlet flange DN 25	0
Small test chamber	1
Medium test chamber	2
Large test chamber	3
Remote control	f
Without	S
mbar l/s	M
Torr l/s	T
Pa m ³ /s	P
Pa m ³ /s, Japan	J
Language	g
French	A
English	B
Voltage	h
100-130 V, 50/60 Hz ¹⁾	7
220-240 V, 50/60 Hz	8
Cable and plug type	i
USA/Japan	1
France/Germany	2
UK	3
Italy	4
Switzerland	5
Without plug	7



¹⁾ not below 110 V for operation with two backing pumps

Easy and quick integration into industrial leak detection systems

Flexible and versatile

With the ASI 30, we have developed the perfect helium/hydrogen leak detection solution dedicated to any industrial leak detection system working in daily operation. This modular leak detector combines high performance, reliability and repeatability with minimum maintenance and maximum up-time. Thanks to its modular design, the ASI 30 is optimized for minimum space requirements and maximum integration options. The vacuum module can be installed in any position and all the other modules are compatible with 1/2 19 inches racks. The user interface becomes optional since the unit can be completely controlled through PCs or PLCs.

Efficient and simple

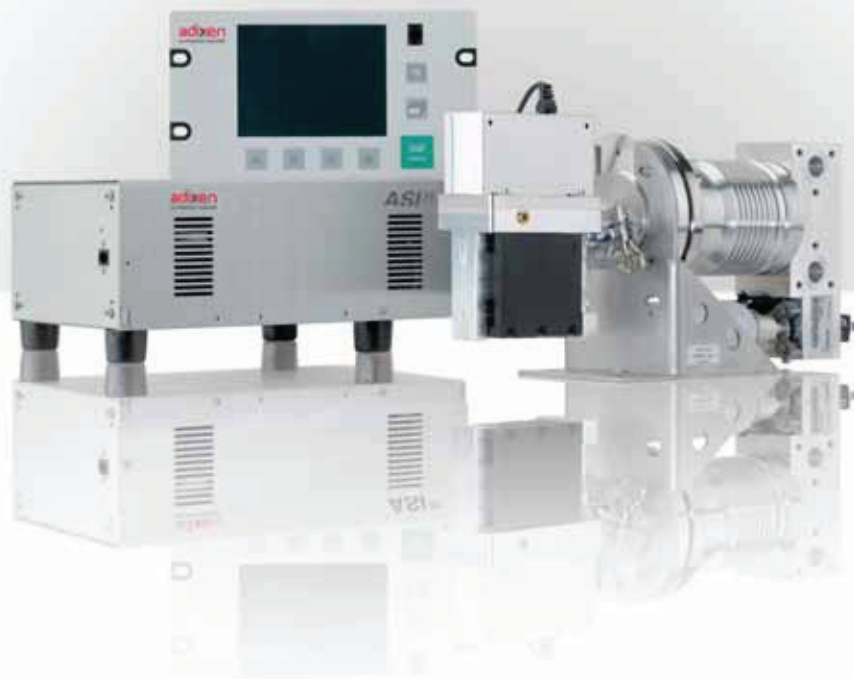
The ASI 30 is extremely flexible and can be easily integrated into leak detection systems. It offers high performance in a robust design for precise, repeatable results under all leak test conditions. The components were designed specially for simple installation with only one 2-cable connection (with adjustable lengths) between vacuum and electronic module.

Dependable

Featuring a low maintenance high vacuum pump for high helium pumping speeds, dual independent yttriated iridium filaments and state-of-the-art electronics, the ASI 30 offers long lasting trouble-free operation. For maximum flexibility, the leak detection system can be designed for tests in the Normal, Gross or Sniffing test mode with the highest sensitivity level.

Customer benefit

- Easy integration
- Simple configuration
- Easy operation
- Small footprint
- Robust design and maximized up-time
- Low maintenance
- Interfacing to industrial standards
- Selectable I/O to meet any requirements
- Optional control panel
- 40 hPa Gross leak crossover
- 4 hPa Normal leak crossover



Applications

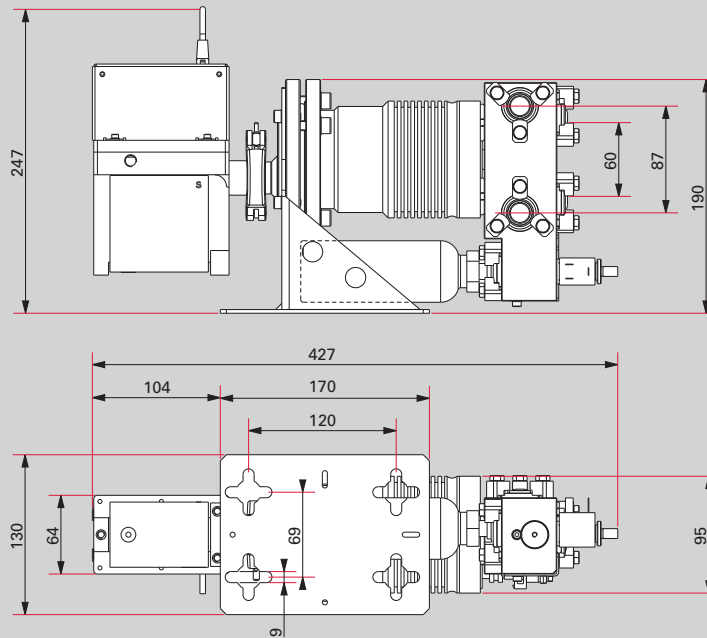
- Automotive
- Compressors
- Condensers
- Packing industry
- Gas generators
- Fire extinguishers
- Cooling

The ASI 30 is the machine builder's choice for its easy integration and interfacing. The ASI 30 is also the end-users' choice, as it is the insurance of simple operation, accurate leak test results and optimized end-product quality. The ASI 30 is the perfect solution for a wide range of industrial applications where vacuum or sniffing leak detection conditions are required.

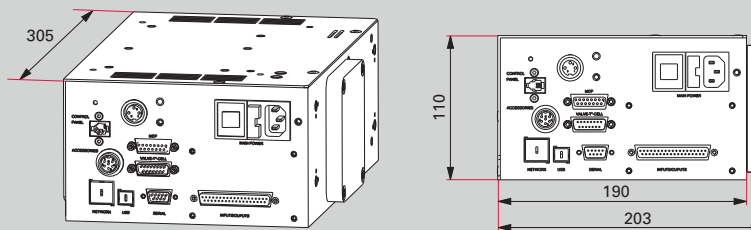
Easy and quick integration into industrial leak detection systems

Dimensions

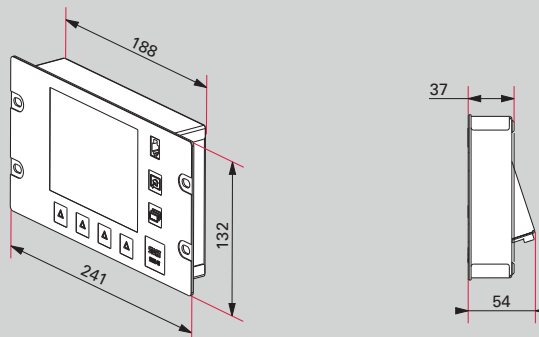
Vacuum module



Electronic module



Control panel



Dimensions in mm

Technical data

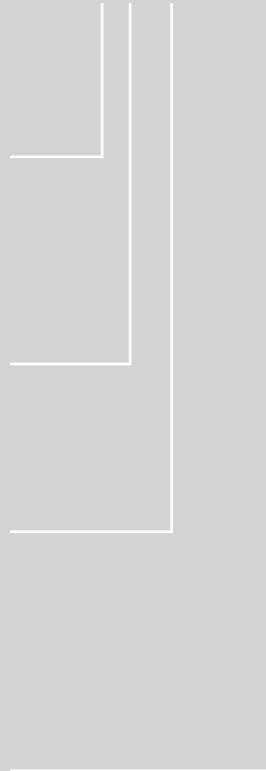
Modular leak detector	ASI 30
Test methods	Vacuum and sniffing leak detection
Minimum detectable leak rate for He (vacuum leak detection)	5 · 10 ⁻⁸ Pa m ³ /s (Gross leak test mode) 5 · 10 ⁻¹³ Pa m ³ /s (Normal leak test mode)
Minimum detectable leak rate for He (sniffer leak detection)	5 · 10 ⁻⁹ Pa m ³ /s
Detectable gases	⁴ He, ³ He, H ₂
Maximum inlet test pressure	40 hPa (Gross leak test mode) 4 hPa (Normal leak test mode)
Start-up time (20°C) without calibration	< 3 min
Response time (sniffing leak detection)	< 0.5 s
Flange (in)	DN 16 ISO-KF
Interfaces (complete option configuration, see order matrix)	RS-232, Ethernet, Profibus, USB
I/O interface	Digital inputs, analog outputs, relay outputs, transistor outputs (open collector)
Weight	
Vacuum module:	8.5 kg
Electronic module:	4.5 kg
Control panel:	1.3 kg
Supply	90-240 V AC - 50/60 Hz
Power consumption max.	150 W
Operating temperature	5 – 40 °C

Order number matrix ASI 30

Order number

L a b c 000 d 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
3.5 m	1
5 m	2
10 m	3
20 m	4
Sniffing option	c
With	S
Without	X
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 + Wifi	3
37 pins I/O + Ethernet	4
37 pins I/O + Bluetooth	5
Profibus	6
Profibus + Bluetooth	7



Sniffer leak detector - ASM 102 S

Portable sniffer leak detector for locating even the smallest leaks quickly and accurately

Localization of leaks

The ASM 102 S sniffer leak detector is the ideal solution for accurately locating minor leaks. This unit has a wide measuring range from 0.1 ppm up to 100 % helium. With a detection limit of up to $1 \cdot 10^{-8}$ Pa m³/s leaks are detected accurately and fast.

This leak detector is very easy to operate and even inexperienced users achieve reliable results. Delivery of important status messages by voice synthesizer and a remote control facility are additional features for the user's convenience.

Portable and flexible

The ASM 102 S sniffer leak detector with its 18 kg lightweight design and small footprint is ideally suited for maintenance work in restricted spaces or outdoors. This helium leak detector is dry and can be operated in any position, which considerably enhances its flexibility.

Besides its voice synthesizer and remote control features, this unit has a sniffer probe with a 5 m long tube. Longer tubes can also, of course, be supplied on request. The leak detector has an interior storage box which can accommodate the unit's entire accessories.

Customer benefit

- The perfect unit for maintenance of pressurized systems
- Portable sniffer leak detector, only 18 kg
- Easy operation
- Various languages and operating voltages available for global use
- A specific hand-held sniffing remote control is delivered with the leak detector; the cable length is to be selected in the order matrix
- Sniffer probe with 5 m hose length and rigid 9 cm nozzle (order number SNC1E1T1) is delivered with the leak detector



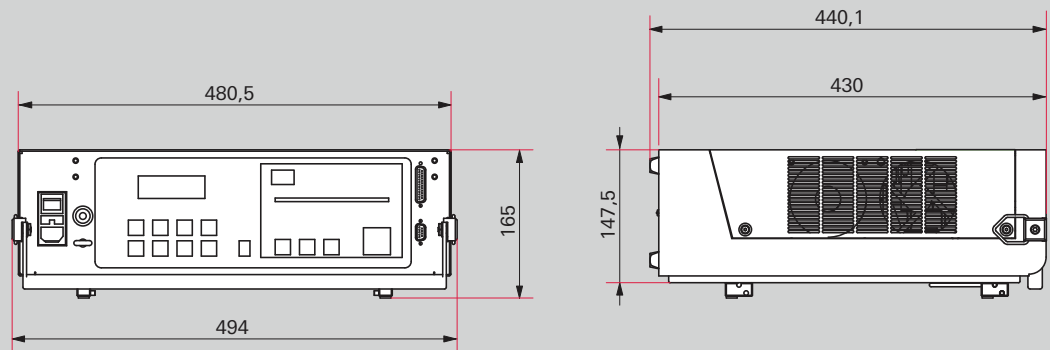
Applications

- Laser with helium as working gas
- Aeronautics and aerospace engineering (fuel)
- Underground cables and tubes
- Gasline installations in semiconductor fabs

Sniffer leak detector - ASM 102 S

Portable sniffer leak detector for locating even the smallest leaks quickly and accurately

Dimensions



Dimensions in mm

Technical data

ASM 102 S

Test method	Sniffing leak detection
Detectable gases	^4He
Minimum detectable leak rate for He (sniffing leak detection)	$1 \cdot 10^{-8} \text{ Pa m}^3/\text{s}$
Measurement range	$1 \cdot 10^{-8}$ to $1 \cdot 10^{-1} \text{ Pa m}^3/\text{s}$ helium (0.1 ppm to 100 % helium)
Noise level	56 dB (A)
Supply	200-240 V, 50/60 Hz
Power consumption max.	100 W
Start-up time (20°C) without calibration	1.5 min
I/O interfaces	Digital inputs (start sniffer, calibration (on external leak), zero); digital outputs (sniffing test in progress, helium signal above sniffer reject setpoint, default...); analog outputs (mantissa, exponent)
Interface	RS-232
Operating temperature	0 – 45 °C
Weight	18 kg

**Order number matrix
ASM 102 S**

Order number

a b 0000 c d e f g 0

Leak detector	a
ASM 102 S	Z

Detectable gases	b
Helium (⁴ He)	0
3 masses (⁴ He, ³ He, H ₂)	3

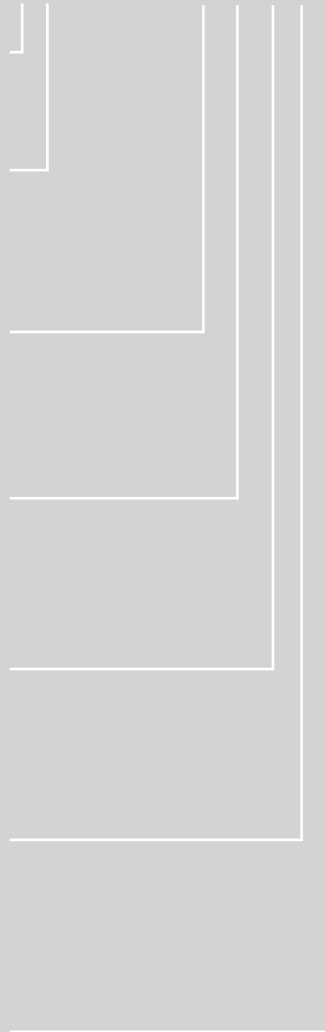
Remote control cable length	c
5 m	2
10 m	4
15 m	5

Measurement unit	d
mbar l/s	M
Torr l/s	T
Pa m ³ /s	P

Language	e
French	A
English	B
German	C
Spanish	F

Supply	f
100-130 V, 50/60 Hz	7
220-240 V, 50/60 Hz	8

Cable length and plug type	g
USA/Japan	1
France/Germany	2
UK	3
Italy	4
Switzerland	5
Without plug	7



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 standard remote control allows to control and display values of the leak detector from a distance of up to 5 m.

Accessories	Order number
Remote control	
Leakage rate in mbar l/s, front panel in English	106688
Leakage rate in Torr l/s, front panel in English	108881
Leakage rate in Pa m ³ /s, front panel in English	108880
Leakage rate in Pa m ³ /s, front panel in Japanese	106690

Sniffer probe

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. Only the SNC1E1T1 is suitable for the ASM 310.	

Sniffing calibration accessory

To be used to connect the calibrated leak to the sniffer probe for a more accurate calibration for sniffing applications.

Sniffer probe for liquids

Sniffer probe for connection to the inlet of the leak detector to measure the helium concentration in water and other liquids.
Leakage rate for 100% helium: $2 \cdot 10^{-5}$ Pa m³/s.



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 m³/s, with helium reservoir.

Gas line type calibrated leak

Permeation membrane for calibration in gas lines, DN 16, VCR 1/4 inch.

Inlet filter

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

Locking clamp

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

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

Helium leak detection systems

The best technology for your quality assurance

An efficient system for your application

Are you looking for the ideal system for your application? Whether integrated in the production line or as a single test station - we develop and manufacture helium leak detection systems according to your requirements. The large number of systems sold in the fields of automotive industry, refrigeration/air conditioning technology, power engineering and packaging technology testifies to our expertise.

We manufacture systems for you using our vacuum components, such as a helium leak detector, as a centerpiece. With a complete pumping station, test chamber, control system including all handling systems and documentation.

In view of the DIN EN ISO 14001 environmental certifications, we would be pleased to include a suitable helium recovery system in our quotation.

Customer benefits

- Maximum sensitivity for detecting the smallest leaks
- Dry test in contrast to bubble test
- Automatic measuring method
- Minimizing test times and operating costs
- Compliance with quality and environmental requirements
- Fully automatic test method



Applications

- Automotive industry
e. g. airbags, aluminum rims, components of fuel systems, air conditioning parts and air suspension systems
- Refrigeration/air conditioning
e. g. vaporizers, compressors
- Vacuum and overpressure technology
e. g. valves and fittings
- Packaging technology
e. g. for pharmaceutical products, foods

Helium recovery units

Resource-conserving technology for economic operation

Economic efficiency and flexibility

Helium is a colorless, odorless, taste-neutral and non-toxic gas. This noble gas is used in various applications, e.g. as coolants, propellants or leak detection gas. The global demand is growing by the year. As a result, prices are expected to rise continuously.

Our helium recovery units are used for reprocessing the helium returned by the tightness test systems to process conditions. The systems are designed as standalone units with PLC. They can be flexibly combined with various leak tightness systems and individually adjusted to their process conditions.

The recovery rate is up to 98% for helium concentrations in the range of 10 – 95%. The values depend on the parameter settings and the helium tightness of the test systems connected. The maximum helium throughput is 400 liters per minute with a maximum end pressure of 55 bar.

Two fundamental principles of helium recovery are available: "balloon recovery" and "container recovery". Balloon recovery has a very good cost-performance ratio, while container recovery is characterized by very high tightness requirements and works on a dry compression principle. In addition customer specific solutions can be generated upon request.

Customer benefits

- Clear reduction of the operating costs
- Recovery rates of up to 98%
- Independent system
- Meets the requirements of DIN EN ISO 14001:2009
- Low space requirement, high availability
- Fully automatic operation
- Suitable for use with various test stations



Applications

- Automotive industry
e. g. airbags, aluminum rims, components of fuel systems, air conditioning parts and air suspension systems
- Refrigeration/air conditioning
e. g. vaporizers, compressors
- Vacuum and overpressure technology
e. g. valves and fittings
- Packaging technology
e. g. for pharmaceutical products, foods

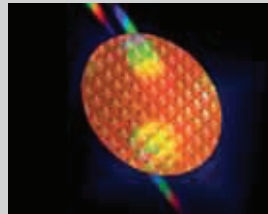
Vacuum Solutions from a single Source

Market segments and applications

The Vacuum solution

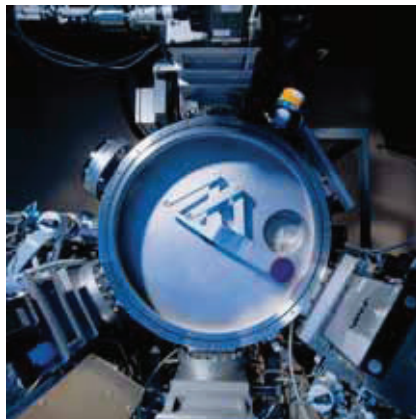
Providing solutions means understanding the customer. One vacuum is not just like another vacuum, the key lies in the specific requirements. Which process should be used with which materials to produce the right results? Under which environmental conditions? Our customers demand sophisticated and intelligent results – and rightly so. Their vacuums have to deliver stability and low-maintenance pumps as well as reduced energy and resource consumption.

A complete vacuum solution covers all processes and steps involved in creating perfect vacuum conditions including consultation, products, accessories, application training programs and service. Our customers' requirements usually involve a high level of complexity. They not only include the precise vacuum requirements but also specific needs covering the entire system, the materials and products to be used and processed as well as process conditions. This is why we develop customized vacuum solutions handinhand with our customers.



Semiconductor

Sputter system



Customer benefits

- Extra long service intervals
- Low energy consumption of the vacuum pumps
- On-site service for all product lines from a single source



Vacuum Solutions from a single Source

Market segments and applications

Industry

Leak detection



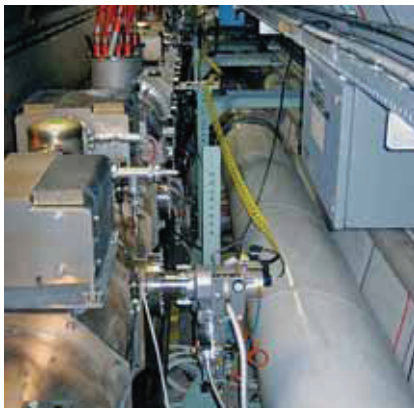
Customer benefits

- Detection of smallest leakages
- High reproducibility
- High throughput and fast cycle times
- Maximum environmental benefit
- On-site service for all product lines from a single source



Research & Development

Accelerator



Customer benefits

- High reliability
- Special solution for accelerator applications
- Resistant to radioactive radiation
- Easy maintenance
- Highest quality and availability
- On-site service for all product lines from a single source



Vacuum Solutions from a single Source

Market segments and applications

Coating

Glass coating



Customer benefits

- Unmatched Cost of ownership thanks to optimum pump design
- High availability due to robust design
- Largest product range in vacuum technology
- On-site service for all product lines from a single source



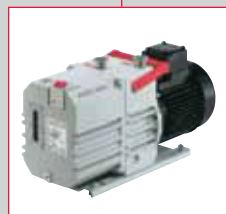
Analytics

Mass spectrometry



Customer benefits

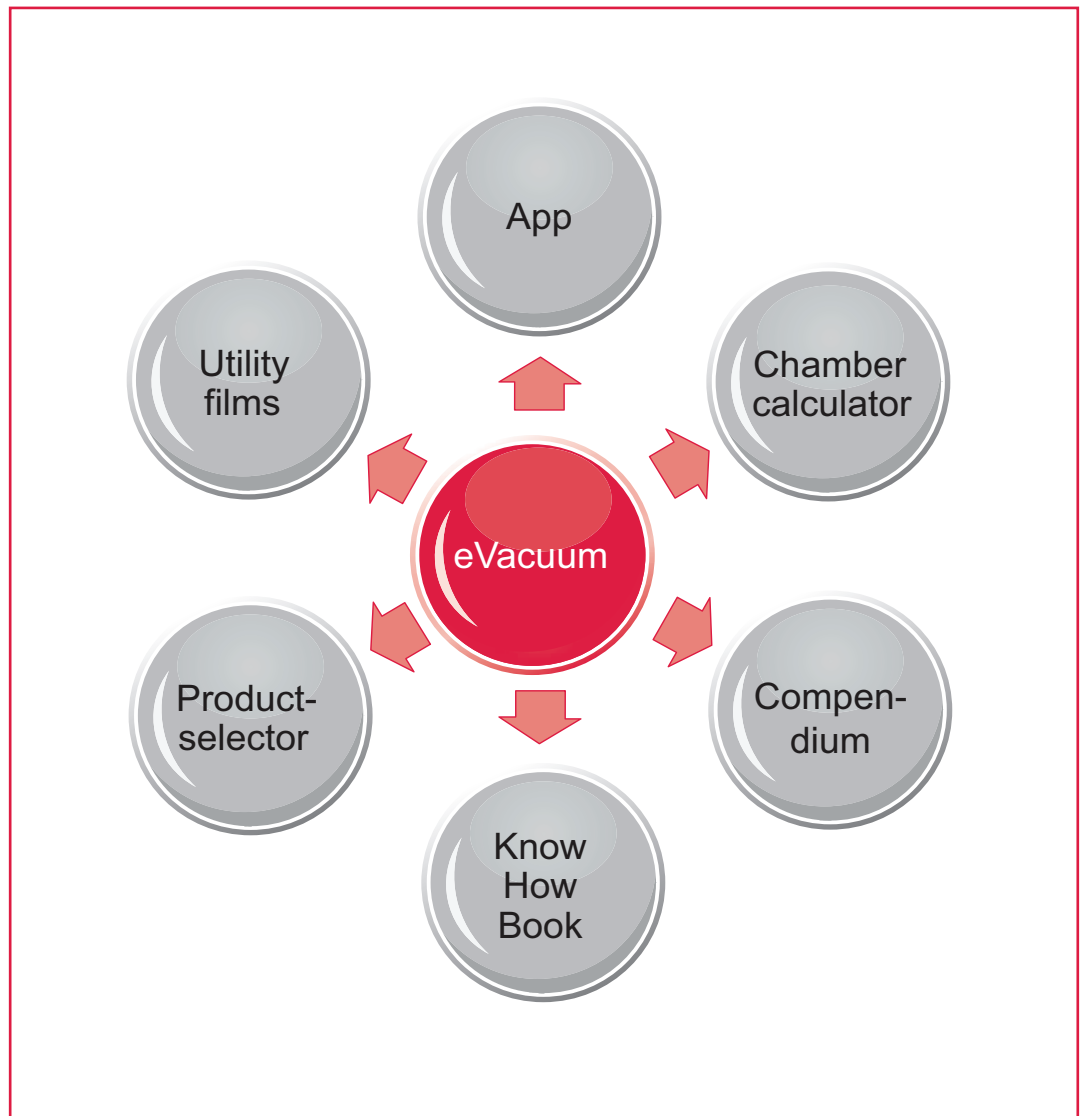
- Specially coordinated component selection
- Common interfaces and easy control
- Synchronization of vacuum generation and -measuring
- On-site service for all product lines from a single source



Vacuum Solutions from a single Source

Market segments and applications

eVacuum



Customer benefits

- Central point of contact for questions concerning vacuum technology for customers and employees
- Simple, comprehensive and interactive knowledge



Vacuum Solutions from a single Source

Product overview









Vacuum Solutions from a single Source




Product overview

Vacuum generation

Rotary vane pumps

Single-stage			Two-stage		
					
UnoLine Plus Pumping speed 250 up to 500 m ³ /h	HenaLine Pumping speed 25 up to 1,000 m ³ /h	Pascal Pumping speed 5.4 up to 15 m ³ /h	PentaLine Pumping speed 22 up to 34 m ³ /h	DuoLine Pumping speed 1.25 up to 250 m ³ /h	Pascal Pumping speed 5.4 up to 60 m ³ /h

Turbopumps

Hybrid bearing	Magnetically levitated	Multi-stage
		
HiPace Pumping speed 10 up to 2,000 l/s	ATH M/HiPace M Pumping speed 255 up to 2,800 l/s	SplitFlow Pumping speed according to requirement

Diaphragm pumps



MVP
Pumping speed
0.25 up to 9.6 m³/h

Piston pumps





XtraDry
Pumping speed
7.5 up to 13 m³/h

Screw pumps







HeptaDry
Pumping speed
110 up to 525 m³/h

Roots pumps

Air cooled	Gas cooled
	
OktaLine Pumping speed 250 up to 25,000 m ³ /h	OktaLine G Pumping speed 250 up to 12,000 m ³ /h

Roots pumping stations






With single-stage backing pump	With two-stage backing pump	With dry backing pump	Compact pumping station
			
CombiLine WU Ultimate pressure up to 2 · 10 ⁻³ hPa	CombiLine WD Ultimate pressure up to 5 · 10 ⁻⁴ hPa	CombiLine WH Ultimate pressure up to 2 · 10 ⁻³ hPa	LRS Pumping speed 150 up to 1,000 m ³ /h

Side channel pumps






OnTool Booster
Pumping speed
130 m³/h

Multi-stage Roots pumps

Light duty	Medium duty	Harsh duty
		
ACP 15-40 Dry and compact	A 100 L Integrated load lock pump	ACP 120/ACG 600 Dry, for industrial application
		
A3P Serie Energy efficient process pump	A3H Serie Harsh processes for semiconductor industry	

Turbo pumping stations

Compact	Standard	High performance
		
HiCube Eco Pumping speed 35 up to 67 l/s	HiCube Classic Pumping speed 35 up to 685 l/s	HiCube Pro Pumping speed 35 up to 685 l/s, short pump-down time

Vacuum Solutions from a single Source

Product overview

Vacuum measurement Vacuum analysis

Measurement equipment

Analog Digital Modular



ActiveLine
Total pressure measurement



DigiLine
Total pressure measurement



ModuLine
Total pressure measurement for R&D

Residual gas analysis



PrismaPlus
Mass spectrometer
Mass range 1-300 u

Gas analysis



HiQuad
Mass spectrometer
Mass range 1-2048 u



OmniStar
Compact benchtop analysis system



HPA
High Pressure Analyzer
Pressure range up to 50 hPa



SPM
Sputter Process Monitor
Pressure range up to 10 hPa

Plasma analysis



PPM
Plasma Process Monitor
Mass range 1-1024 amu

Leak detection

Leak detectors

Portable



MiniTest
Mobile, even for harsh environments



ASM 310
Mobile service use

Compact



ASM 340
High performance all-rounder



ASM 340 D
Dry all-rounder

High performance



ASM 380
Dry and mobile



ASM 182 T
Robust industry standard



ASM 192 T
Flexible console devices

Leak detectors

Workstation



ASM 1002
Ergonomical test station

Modular



ASI 30
Industrial leak detection systems

Sniffing leak detection



ASM 102 S
Dry and portable

Vacuum Solutions from a single Source

Product overview

Vacuum components

Chambers

Standard **Customized**



TrinosLine
Cubical, horizontal/
vertical, modular



TrinosLine
Customized for specific
customer applications

Components, valves, manipulators

Components **Hoses and flex connectors** **Glass elements** **Customized elements** **Valves** **Feedthroughs** **Manipulators**



ISO-KF, ISO-K,
ISO-F, CF, COF



ISO-KF, ISO-K, CF



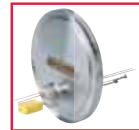
ISO-KF, ISO-K,
ISO-F, CF



Customized for
specific customer
applications



Shut-off valves,
gas dosing valves



Current/voltage,
fluids, insulators,
combinations



X-, Y-, Z-motion,
rotation, tilting

System technology

Plant construction

Contamination Management Solutions **Multi-stage vacuum process** **Coating** **Helium leak detection systems**



APA
Monitoring
of contamination



APR
Removal
of contamination



Vacu2
For die casting
processes



Classic
Coating systems



**Complete
systems**

Solutions

Service solutions

Worldwide quality



**Representatives
worldwide**



Genuine parts



**Training
courses**



Maintenance

Consulting competence

Applications **Products** **eVacuum**



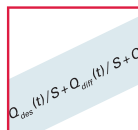
Know-how



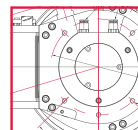
Experience



**Customer
intimacy**



Dimensioning



Engineering



Website



App

**Vacuum solutions
from a single source**

Pfeiffer Vacuum stands for innovative and custom vacuum solutions worldwide, technological perfection, competent advice and reliable service.

**Complete range
of products**

From a single component to complex systems:
We are the only supplier of vacuum technology
that provides a complete product portfolio.

**Competence in
theory and practice**

Benefit from our know-how and our portfolio of training
opportunities! We support you with your plant layout
and provide first-class on-site service worldwide.

**Are you looking for a
perfect vacuum solution?
Please contact us:**

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