

60 Years of Leak Detection Expertise: Pfeiffer Vacuum+Fab Solutions Celebrates a Milestone

Pfeiffer Vacuum+Fab Solutions, a member of the global Busch Group, celebrates 60 years of leak detection expertise.

ASSLAR, GERMANY, July 24, 2026 /EINPresswire.com/ -- This milestone marks six decades since the commercialization of the company's first helium leak detector, the ASM 4, and highlights the continuous development of a portfolio that has supported demanding industrial and scientific applications around the world.

The story began in Annecy, France, in the 1960s. A request from a nuclear research and development hub required a highly sensitive solution for tightness testing in isotope enrichment for nuclear power plant fuel. Existing leak detection methods were not sufficient for the demanding process requirements, particularly because the equipment had to prevent contamination such as moisture. Drawing on strong vacuum technology know-how, the engineers developed a new type of leak detector based on mass spectrometry with helium as tracer gas: the ASM 4.

Vacuum technology as a driver

As a vacuum solution manufacturer and supplier, Pfeiffer has always benefited from the close collaboration between its vacuum technology and leak detector development teams. This strong connection has enabled the [leak detector portfolio](#) to continuously integrate technological



From the first ASM 4 leak detector to the new ASM HVM, Pfeiffer looks back on decades of technological advancement in leak detection. Source: Pfeiffer Vacuum+Fab Solutions.



The first leak detector from Pfeiffer was invented in the 1960s. The ASM 4 used helium as a tracer gas. Source: Pfeiffer Vacuum+Fab Solutions.

advances from vacuum generation, helping to improve performance, cleanliness, and robustness over time.

Early developments focused on more compact and easier-to-use systems, such as the ASM 10, while maintaining high detection sensitivity. In the 1980s, turbomolecular vacuum pumps replaced diffusion vacuum pumps and liquid nitrogen traps, making leak detectors faster and more convenient to operate. In the 1990s, automatic calibration and dry primary pumping were introduced to meet the specific needs of industries such as semiconductor manufacturing. The ASM 142 later became one of the most recognized leak detectors in the market, followed by further generations designed for high performance, ease of use, and robustness.

Reliable leak testing across industries

Today, Pfeiffer leak detectors are used wherever leak tightness is essential for product quality, process reliability, and safety. Applications range from vacuum-insulated products and medical devices to battery manufacturing, semiconductor production, industrial quality assurance, maintenance and research and development. Whether components must be protected from moisture, contamination, or process losses, tracer gas leak detection provides the sensitivity and reliability that are required for demanding test environments.

ASM HVM: clean, mobile, high-sensitivity leak testing

In its anniversary year, Pfeiffer continues this tradition of innovation with the launch of the new ASM HVM. The mobile leak detector is designed for reliable, high-sensitivity [helium leak testing](#) of medium test volumes in semiconductor manufacturing, R&D, and other industrial environments where mobility, cleanliness, and fast testing are essential.

Combining a turbomolecular vacuum pump with a dry scroll backing pump into a powerful system, the ASM HVM enables fast, oil-free testing and is suitable for cleanroom use. Its compact and ergonomic design, rotatable and removable color touch display, and integrated toolbox support efficient leak detection in different testing areas. "Over the past 60 years, Pfeiffer has continuously shaped the development of tracer gas leak detection," says Clotilde Lesigne, Head of Product Management Leak Detection at Pfeiffer. "With the ASM HVM, we are building on this experience and addressing today's customer needs for clean, mobile, ergonomic, and high-performance leak testing solutions."

Looking ahead: leak detection for future markets

Looking ahead, future markets such as data center cooling, battery manufacturing, and the hydrogen economy will create new demands for reliable leak testing. As these applications require tight, clean, and safe solutions, Pfeiffer will continue to support customers with an evolving portfolio of leak detection technologies and its application expertise.

Over the past 60 years, the company has continuously expanded its capabilities to address changing requirements. Today, customers benefit not only from a broad range of leak detection technologies, including tracer gas leak detection, [Optical Emission Spectroscopy](#) (OES) solutions

for CCIT applications, and Micro-Flow technologies for air-based leak testing. They also gain access to application expertise developed through decades of experience serving a wide range of industries.

Based on this expertise, Pfeiffer supports customers throughout the entire leak testing process, from technology selection and feasibility studies to production implementation and service. Through its worldwide network of application laboratories, customers can access expert consulting, feasibility studies, and contract leak testing services to identify the most suitable solution for their specific application.

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