

dado[®] lab

General Catalogue

Monitoring and sampling equipment
for stack emission and environment



Who we are



We are designers and manufacturers of advanced instrumentation for environmental and stack emissions sampling and monitoring.

Founded in 2013, Dado Lab Srl was born from the ambition to bring new energy to the sector, building on over 18 years of experience in the development and commercialization of sampling equipment and solutions.

This deep-rooted expertise is our greatest strength. It enables us to create innovative, cutting-edge technologies while offering high-level technical and application support to our customers.

This combination of know-how, innovation, and service is what truly sets us apart, and what our customers continue to recognize and value.

Values and philosophy

At Dado Lab, values come first, before products, solutions, or commercial goals.

We believe in ethics and respect, not only towards our customers and distributors but also towards our suppliers. These same principles guide how we work with our team, and we expect our employees to share and embody our vision.

Every Dado Lab project is driven by the desire to create tools that truly enhance the user's work. We integrate innovative ideas and cutting-edge technologies to improve both the quality of operations and the reliability of data.

Whether it's a small lab, a large industrial group, a public or private organization, or a university, we like to think our customers recognize our commitment to delivering advanced, high-value solutions—technologically and practically.



What we do



We design and develop solutions for sampling parameters such as particulate matter and gaseous micropollutants, both in environmental contexts and stack emissions, in full compliance with the most widely recognized official methods.

Our product portfolio includes:

- Complete systems for isokinetic sampling from emissions
- Instruments for environmental sampling of total and fractional particulate matter
- Devices for collecting gaseous-phase compounds
- A full range of consumables to support and complete the sampling process

In addition, we offer technical support not only for our own equipment but also for third-party sampling instruments.



ST5/ST5 Evo: automatic isokinetic sampler

It's the latest generation of automatic isokinetic samplers made both in all-in-one and split construction and equipped with remote communication with app.

Equipped with the most up-to-date technology, ST5 is the ideal tool for stack testers as it is designed to speed up isokinetic sampling operations and data traceability.

ST5 is available in two versions; integrated in a single cabinet or in the Evo version, with pump unit separated from the control unit.



ST5 LT: automatic isokinetic sampler

Automatic isokinetic sampler with compact size and low weight, the ST5 LT can be also battery operated and can be used on the field with non-heated probe or combined with an additional thermoregulation unit, allowing sampling operations on stack emission without the need of power supply.

ST5 LT integrates the isokinetic calculation and control functions of ST5, ensuring accurate and superior operation compared to other solutions.

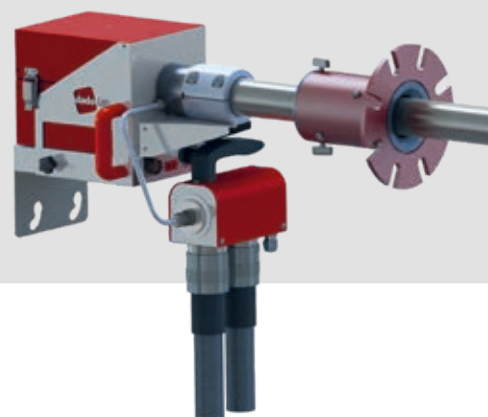


HP5: heated isokinetic probe

HP5 is the isokinetic probe developed as a "sample distribution center".

HP5 is developed to be a versatile solution to satisfy both EN and EPA sampling methods. In addition to condensing devices dedicated to the most common official methods, HP5 can also be equipped with a second gas sampling line.

HP5 is designed to rotate on its axis and can therefore perform sampling on both vertical and horizontal ducts, and it can also be used for the evaluation of the swirl angle as required by EN16911 for the measurement of speed and flow rate in the stack.





CP5: isokinetic cold probe

The CP5 is the all-in-one isokinetic cold probe, featuring AISI 316 stainless steel inner tube, type S Pitot tube, and stack temperature thermocouple.

It can be equipped with a 47 mm filter holder with gooseneck and interchangeable nozzles, and is also ideal for PM10/2.5 sampling using a 2S dual-stage impactor.

The differential pressure and suction connectors are positioned at the rear of the probe and protected by a robust handle, which also serves as a lifting aid for elevated sampling points.



SC6: smart chiller

The SC6 is the most compact, lightweight, and high-performance chiller on the market, featuring both an impinger bath and a coolant recirculation pump.

It requires no operator intervention, just power it on, fill it with water, and it will automatically cool the refrigerant to the desired setpoint.



Condensing devices

Dado Lab designs and manufactures condensation systems for the measurement of particulate matter, heavy metals, and organic compounds such as PCDD/PCDF, PAH, and PFAS, whether as standalone units or side sampling lines, all in full compliance with international standards.

All Dado Lab condensation systems feature a tool-free connection that allows quick and secure attachment to the probe HUB without the need for screws.





Peltier cooling box

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This box features two air-cooled thermoelectric Peltier modules that actively refrigerate the impinger train.

Unlike passive systems that require constant ice replenishment, the Peltier-based solution ensures continuous cooling without the need for ice.

The PLT box is compatible with both 250 cc and 500 cc impingers.



ST2: stack velocity and flowrate meter

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Compact, practical, and technologically advanced, the ST2 is the ideal device for measuring stack and duct velocity and flow.

Designed to work seamlessly with the Dado Lab Companion app for Android, it allows users to easily configure the device, manage measurements, and download data, all from a smartphone or tablet.



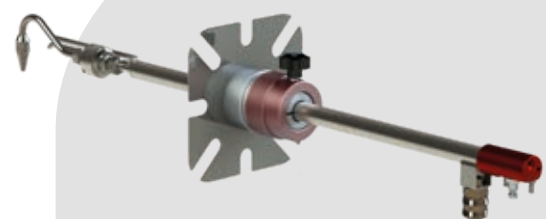
CP2: isokinetic cold probe

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Compact and practical, the CP2 is designed for accurate measurement of differential pressure and stack temperature, featuring an integrated Pitot S tube and thermocouple.

It includes a quick-connect mount for the ST2, allowing hands-free operation during measurements.

Additionally, the CP2 can be equipped with a 25mm or 47mm filter holder with gooseneck and nozzles, making it suitable for particulate sampling in small ducts.





QB1: constant flow sampler

Designed for general-purpose use, QB1 constant flow samplers with mechanical regulation are ideal for the determination of particulate matter, asbestos fibers, and gaseous pollutants.

Renowned for their simplicity, compact design, robustness, and reliability, these are the defining features of the QB1 family.

Available in a variety of models, QB1 samplers are tailored to meet the needs of both ambient air and emission sampling applications.



QB1-z: digital constant flow sampler

Accurate and reliable, the “z” series builds on the strengths of its predecessors, offering robust construction, intuitive operation, and excellent portability.

This latest generation of constant flow samplers features a fully digital interface for advanced control of programming and settings, along with local or app-based data processing and transfer, ensuring precise data acquisition and full traceability.

Powered by high-efficiency LiFePO₄ batteries, the QB1 “z” series is ideal for a wide range of sampling environments, including indoor asbestos monitoring.

Thanks to seamless integration with the ST2 stack velocity and flowrate meter and the Dadolab Companion App, fully battery-operated isokinetic sampling is now possible, offering unmatched autonomy and convenience for field operations.



HP1: heated probe for gas sampling

Developed for gas compounds sampling in flue gas stack emissions, both in combination with real-time analyzers, in particular with FID in accordance with EN12619 standard, and with dilution sampling lines.

HP1 is light, compact, easy to handle but, at the same time, sturdy thanks to the construction with quality materials.

Available in both single and double outlet version, thermoregulated or self-regulating.





HP2: heated titanium probe

The Dado Lab HP2 is the gas sampling probe made from Grade 2 Titanium, specifically designed for emission monitoring applications where the stack port does not allow for flange mounting.

By filtering directly at the probe, it protects the heated sampling line and ensures the proper operation of downstream analytical instrumentation.

The probe's self-regulating cartridge heater dynamically adjusts power output to maintain the desired setpoint temperature.

This design eliminates the need for traditional thermostats or mechanical switches, offering greater reliability, simplified construction, and thermal stability even under variable operating conditions.

The Dado Lab Locking Ring is the smart and functional solution that replaces the stainless steel termination of the heated line, effectively eliminating cold spots.

It ensures perfect pneumatic sealing, preserves the integrity of heated lines, and maintains optimal thermal continuity throughout the sampling path, enhancing both sampling reliability and data quality, even in the most demanding environments.



GD1: gas conditioning system

Dado Lab GD1 is the compact gas dryer designed for portable stack applications, ensuring a validated dew point output and full protection of downstream analyzers.

It features an advanced electronic controller that monitors refrigerant bath temperature and activates sampling at the set point to prevent condensate intake.

As specified in the EN 15058:2017 standard, it provides the outlet dew point temperature via a type K thermocouple, ensuring continuous monitoring and maintenance below 4°C, regardless of the absolute humidity at the inlet.

Dew point data can be integrated into isokinetic reports via the ST5 TCK input for complete process control. The GD1 matches and exceeds the performance of systems used in certification.



GD1-R: gas rack conditioning system

The GD1-R is a 19" rack-mounted gas conditioning system designed for continuous 24/7 operation. It features an inverter-driven refrigeration compressor that cools the gas stream directly, ensuring easy integration with PLCs or similar systems. Cooling coils are available in AISI 316 stainless steel or glass, depending on application needs.

The GD1-R2 is a dual-channel variant with two condensation units that can operate in series or parallel, offering flexibility for high-flow, redundant, or staged cooling applications.





CF1: digital multi-parameter calibrator

Dado Lab CF1 is the compact, battery-operating, multi-parameter digital calibrator designed to check and calibration of personal, environmental and stack emissions samplers.

Fully compliant with international standards and ISO17025 certifiable, CF1 delivers professional-grade performance in a highly portable format.

It simultaneously measures flow rate, volume and ambient pressure and, when equipped with the optional external probe, also ambient temperature and relative humidity.

The flow measurement is based on a laminar flow mass sensor, enabling a wide rangeability of 1:100 within a single device.

Two measurement ranges are available: 0.45 to 45 NI/min in the standard version and 0.05 to 5.0 NI/min in the LF version.

Flow and volume readings are displayed in actual, normalized, or dry conditions, offering maximum flexibility for a wide range of applications.



GM1: calibration gas mixer with vapour generator

The Calibration Gas Mixer GM1 is the modular, scalable and game-changing solution for gas dilution and humidity control.

Engineered for calibration and linearity verification of automatic gas analyzers, it delivers accurate mixing and dilution of diverse gas matrices and chemical compounds.

It supports both gaseous standards from cylinders and aqueous solutions.

While many systems offer basic gas dilution or humidity control, GM1 delivers a fully integrated, modular platform that adapts to your workflow, whether you're in the lab or on-site.

Modularity is at the core of the system: from 1 to 3 MFCs, with or without the vapour generator, all configurations are seamlessly integrated into a single, compact enclosure, eliminating the need for external stackable modules or additional hardware.

GM1 is also the ideal tool for verifying stack moisture absorption efficiency in accordance with EN14790, and for assessing the repeatability of adsorption lines for gas-phase compounds such as SO_x, HCl, or HF. These compounds can be vaporized from liquid solutions and introduced into the impinger train at known concentrations.

This allows GM1 to simulate real stack conditions, with controlled gas concentrations and humidity levels, using both gas cylinders and liquid solutions.





Giano Gemini: certified EN12341:2023 sequential sampler

Available in both single and dual-channel configurations, supporting either outdoor or rack-mounted installations, Giano Gemini is certified under EN12341:2023 by TÜV Rheinland (report EuL/21261817/A), it meets the highest standards for particulate matter sampling and analysis.

Its modular construction ensures that weight is distributed across manageable components, allowing for straightforward, single-person installation without the need for specialized equipment.

Equipped with Smart Filter Cartridges, the system fully automates filter tracking and data collection, eliminating the need for manual input. Seamless integration with Sartorius balances ensures complete traceability and error-free results throughout the sampling process.

The system features a modern and responsive DCM (Data Collector Manager) accessible via local network or LTE/UMTS modem. This secure, multilingual web platform provides real-time notifications via email and in-app alerts, triggered by programmable events.

A patented technology enables real-time Black Carbon analysis directly on the filter during PM sampling, offering unprecedented insight and accuracy in environmental monitoring.



1PMx: single filter sampler

Dado Lab 1PMx is the compact and lightweight environmental sampler featuring a single-filter design, developed from the latest generation of sequential models. Despite its small size, it incorporates the same advanced electronics, sensors, interfaces, and remote connectivity options found in high-end systems.

Encased in a corrosion-resistant housing, the 1PMx delivers exceptional performance with high accuracy and fast flow stabilization, thanks to its Venturi-based digital flow control. It also requires minimal maintenance.

Built on a unified, modular platform, the 1PMx can be configured in various ways to accommodate a wide range of environmental sampling applications, making it a premium choice among single-filter samplers.

The 1PMx HV is the high-volume variant, specifically designed to comply with EPA TO-9 and TO-13 standards for particulate sampling and the analysis of PCDD/PCDF, IPA and PFAS. It operates at flow rates between 180 and 220 L/min.

Its sampling module includes a 102 mm filter holder and a PUF cartridge for collecting gaseous phases. It can also be equipped with PM10 and PM2.5 sampling heads for added versatility.





1Air: multipurpose smart sampler

1Air is the next-generation platform for air sampling: ultra-lightweight, battery-powered, and seamlessly connected to the Dado Lab Companion App for intuitive operation and streamlined data management. Designed with a clean, user-friendly interface, the platform supports a wide range of configurations to meet diverse environmental monitoring needs.

1Air is the low-volume sampler compliant with EN12341:2023, ideal for collecting TSP, PM10, PM2.5, and PM1 using either EN-LVS or EPA inlets, ensuring regulatory-grade performance in a compact form.

1Air Gas and 1Air Seq are 8-way sequential manifold samplers, purpose-built for gas (benzene) and ramp (asbestos) sampling. Both models feature pumps optimized for low flow rates and offer programmable sampling based on predefined total volumes. Their intelligent valve management system supports both single and dual configurations, ensuring full compatibility with vials, cassettes, and 47mm open-face filter holders.

1Air HV is the high-volume solution for both routine environmental monitoring—including PFAS, PAHs, PCDD/PCDF, and heavy metals, in compliance with ISO 16362, ISO 12884, and US EPA TO9/TO13—and emergency response scenarios where portability and autonomy are critical. Whether for daily operations or rapid deployment in the field, 1Air HV delivers high-performance sampling in a compact, connected, and battery-powered format.

1Air: One platform. Infinite applications.



Furthermore, Dado lab can provide:

Consumables

Our consumables catalog includes a wide range of products such as glass or quartz fiber filters and thimbles, cellulose membranes or polymeric membranes made of PTFE, polycarbonate or silver.

For chemical species determinations, we can supply charcoal, silica gel, XAD-2, XAD-7, Tenax, Microlite tubes and PUF cartridges for micropollutants adsorption.



Multi-brand technical assistance

In addition to providing technical support for our own products, our service department is also equipped to perform maintenance on samplers and instruments from other manufacturers.

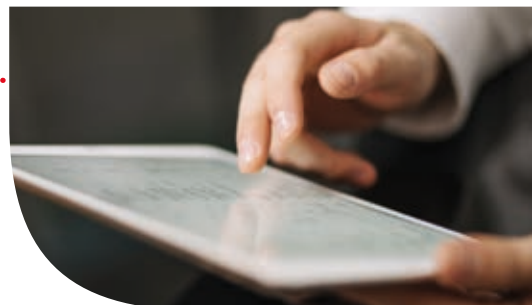
For more information, feel free to contact us directly at service@dadolab.com.



Technical and application support

With decades of expertise in stack emissions, environmental monitoring, and occupational hygiene assessments, we provide our customers with top-tier support.

Comprehensive guides for configuring and assembling sampling systems are readily available on our website.



For any request contact:

Andrea Ceresa

International sales manager

✉ a.ceresa@dadolab.com

☎ +39 392 6140807



Dado Lab S.r.l. a company of Sdiptech Group

📍 Via Pellizza da Volpedo 101A, 20092 Cinisello B. (MI) - Italy

☎ +39 02 36569420 ✉ info@dadolab.com 🌐 www.dadolab.com

