



1PMx: Single filter environmental sampler



Dado Lab 1PMx is the compact, lightweight environmental sampler with a single filter, developed from the latest generation of sequential models.

It integrates the same advanced electronics, sensors, interfaces and remote connectivity options as its high-end counterparts.

Housed in a corrosion-resistant enclosure, the 1PMx ensures outstanding performance with high accuracy, rapid flow stabilization, thanks to its Venturi based digital flow control, and minimal maintenance requirements.

The sampler offers a unified, modular platform with different possible configurations to meet a wide range of environmental sampling needs.

Dado Lab 1PMx stands out as the premium solution among single-filter samplers, offering versatility, precision, and durability across a broad spectrum of environmental monitoring needs.

One platform: different powerful solutions.



1PMx is equipped with a 4.5 m³/h rotary vane pump. It complies with EN12341:2023 for TSP, PM₁₀, PM_{2.5}, and PM₁ sampling using EN-LVS or EPA inlets.

1PMxHF, instead, features an 8.5 m³/h rotary vane pump, ideal for high-resistance applications such as radioisotope sampling. Optional accessories include PUF cartridges for micro-pollutants and PTFE-coated filter supports for heavy metals.

1PMxHV: Designed for high-flow sampling of PFAS, PAHs, PCDD/PCDF, and heavy metals, in compliance with ISO 16362, ISO 12884, and US EPA TO9/TO13 standards.

It features a brushless three-stage blower (100–600 L/min), with additional flow ranges available upon request.

The pump delivers outstanding performance, compensating for pressure drops up to 30 kPa.

Flow control is managed by an orifice mass flow meter, ensuring reliable operation even at temperatures as low as -20°C.



1PMx HV: high flow sampling for PFAS, PAHs, PCDD/PCDF

For the determination of PAHs, PCBs, and related compounds, the 1PMxHV sampler can be fitted with a dedicated module designed in compliance with ISO 12884 and US EPA TO9/TO13 standards.

This module enables particulate collection on a 102 mm diameter filter and gas-phase adsorption on a 60 mm diameter PUF (Polyurethane Foam) cartridge.

The sampling module operates at a flow rate of 180–220 L/min. Its housing is constructed from anodized aluminum and includes an integrated filter holder. The glass cartridge containing the PUF is positioned beneath the filter, and the entire assembly mounts directly onto the sampling tube at the top of the instrument.

For secure transport to the laboratory, sealing caps and a protective container are provided.

When PM₁₀ or PM_{2.5} fraction analysis is required, dedicated sampling heads are available. These heads are specifically designed to operate at 200 L/min, ensuring accurate and compliant particulate matter monitoring.

Additionally, an 8×10" filter holder with integrated 90 mm PUF support and a heated cabinet is available for the 1PMxHV, delivering enhanced performance for demanding applications.



Modern & responsive DCM Data Collector Manager / API

Whether via IoT or through the local network, the sampler is connected directly to a secure, dedicated web platform, the Dado Lab DCM (Data Collector Manager).

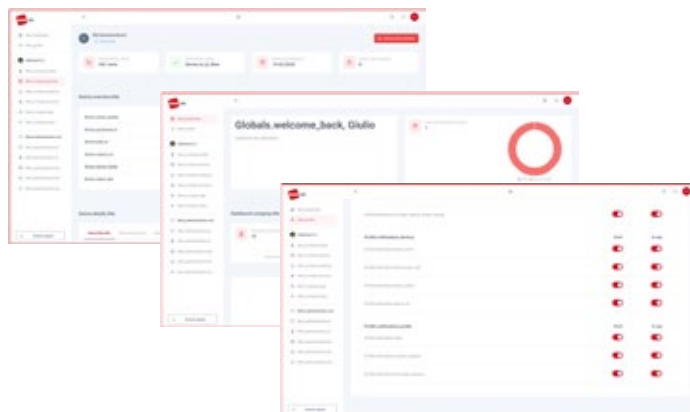
DCM acts as the multilanguage centralized control hub, capable of sending real-time notifications by mail and in-app, in response to programmable status changes, such as alarms or system failures. This ensures you're always informed and able to respond quickly, maximizing uptime and operational reliability.

With DCM, you can:

- Access real-time data from all Dado Lab equipment
- Monitor device status and review alarm history
- Remotely configure or adjust sampling schedules and parameters
- Full access to the complete documentation of the equipment (like certificates or service reports)

Access is managed through a user authentication system with customizable privilege levels, ensuring secure and role-based control.

Dado lab considers data safety and traceability as a priority.



Part number and accessories

1PMx : delivered with USB Flash disk, Test reports and Manual, Power cable, 47mm cassette

102 103 10011PMx PM - Single Filter Sampler for EN-LVS head

102 103 10111PMx HF Single Filter TSP Sampler

Accessories

102 103 20011PMx support stand

102 101 2015EN-LVS Sampling head (without nozzles)

102 101 2017Set of nozzle for PM10 @2.3 m3/h

102 101 2019Set of nozzle for PM2.5 @2.3 m3/h

102 101 2010TSP-LVS samplig head

102 101 400047mm Filterholder for EN-LVS PMx Head

102 101 4005Pack of 2 POM cartridges for EN-LVS head filterholder

102 103 2011PUF cartridge for EN-LVS Head

102 103 400147mm cassette for 1PMx

102 103 4011Complete 47mm filterholder for 1PMx

1PMxHV : delivered with USB Flash disk, Test reports and Manual, Power cable

102 105 10011PMx HV - Single Filter High Volume Sampler

Accessories

102 103 20011PMx support stand

102 105 2031102mm filter module including PUF cartridge

102 105 2035Glass PUF Cartridge

102 105 2036Plugs Glass PUF Cartridge

102 105 2001PM10 sampling head for 1PM HV

102 105 2011PM2.5 sampling head for 1PM HV

102 105 2013PM1 sampling head for 1PM HV

102 105 20338x10" filterholder including PUF support and cabinet for 1PMx HV w/ heating

102 105 2041F/F Adapter for 1PM VX

102 104 400255mm Filterholder open QC

Connectivity:

102 101 2059.....Ethernet interface w/ LAN socket for Giano/Gemini

102 101 2063Outdoor ethernet plug kit

102 101 2090UMTS Modem for remote connection (no SIM)

102 101 2093Prepaid SIM 36 months incl. activation and Static IP (500 MB/month)

102 101 2093A.....SIM 1 year additional traffic (500 MB/month)

102 101 2095Dado web platform 3 years subscription

102 101 2096Dado web platform 3 years additional unit subscription

102 101 20991 year/1 unit API Service subscription

Technical characteristics

Constructive	Operation conditions	-20 ÷ 50°C
	Stock conditions	-20 ÷ 50°C, 95% UR
	Display	3.5" Graphic LCD (QVGA)
	Data port	USB, optional Ethernet RJ45
	Internal memory	16GB
	Power supply	230 Vac ±10% 50/60Hz
	Materials	Steel/Aluminum combined structure
	Keyboard	Polycarbonate, tactile effect keys
	Dimensions	47x32x32 cm
	Weight Support Stand	5Kg
Ambient Pressure & Pressure Drop		
	Range	10 ÷ 105 kPa (1050 mBar)
	Hysteresis and linearity	0.25 % F.S
	Resolution	0.01 kPa (0.1 mBar)
	Accuracy	Better than ±1% (±0.25kPa)
Ambient Temperature		
	Type	Digital
	Range	-10 ÷ 60°C
	Resolution	0.1°C
	Accuracy	1% ± 0.4 °C
Wind Speed		
	Range	0.5 ÷ 80 m/s
	Resolution	0.1 m/s
	Accuracy	± 1m/s
Wind Direction		
	Resolution	8 sector on compass rose
	Accuracy	± 4°
1PMx LVS		
	Weight	17Kg
	Power consumption	Rotative
	Pump type:	150W
	Nominal pump flowrate	4.5 m3/h
	Control type	Orifice mass flow meter
	Range	5 ÷ 50 l/min
	Resolution	0.01 l/min
	Accuracy	2%
1PMx HF		
	Weight	18.5Kg
	Power consumption	Rotative
	Pump type:	170W
	Nominal pump flowrate	8.5 m3/h
	Control type	Orifice mass flow meter
	Range	5 ÷ 50 l/min
	Resolution	0.01 l/min
	Accuracy	2%
1PMx HV		
	Weight	12Kg
	Power consumption	1100 W
	Pump type:	Brushless blower
	Max pressure drop	30KPa
	Nominal pump flowrate	2500 l/min
	Control type	Orifice mass flow meter
	Range	100 ÷ 600 l/min
		Further ranges available on request
	Resolution	0.1 l/min
	Accuracy	2%

Dimensions (mm)

