

New basic sampler PM4-2! Super small and lightweight!

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**Now still easier to handle:
Power supply and sound absorber integrated
incl. adapter for mounting on tripod**



Gravikon PM 4-2 still more compact

Stationary dust sampling system for the mobile use (license BGIA)

Constant flow rate 4 m³/h, filter diam. 70 mm

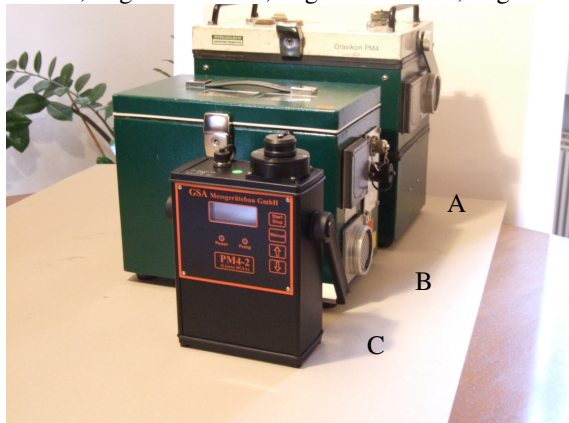
The portable, high volume dust sampling system Gravikon PM 4 has been developed by the BGIA Institute for Occupational Safety at Work, St. Augustin and is manufactured under license by GSA Messgerätebau GmbH, Neuss. The instrument can be used for the sampling of the inhalable dust and the respirable fraction of inert dusts acc. to EN 481 as well as for the simultaneous sampling of particulates and filter passing gaseous substances (PCDD/PCDF, PCB). Depending on the problem definition the suitable filter head is connected to the basic instrument.

The sampler Gravikon PM 4 offers the possibility of an optional mains-independent operation, e.g. for the use at mobile work places, and helps to solve many measurement tasks because of its high, regulated flow rate of 4 m³/h and the flexible and easily handled sampling heads. On one hand the relative high air throughput allows the measurement at places with low concentrations of hazardous substances, on the other hand the Gravikon PM 4 is substantially suitable for the sampling in small rooms and drivers' cabins without influence on the concentration. One special application for instance is the use for the determination of diesel motor emissions (DME).

Construction:

The basic sampler PM 4 has been completely redesigned and substantially reduced in dimensions and weight compared with the previous constructions:

A	B	C
PM 4 (Ströhl.)	PM 4 (GSA)	PM 4-2
40x26x39	33x21x26	21x9x34
15,5 kg	9,0 kg	3,3 kg



Comparison of the different stages of development

The basic sampler PM 4-2 is equipped with a state-of-the-art high performance turbine and is easily operated by means of the keypad. The instrument is powered either by mains via the integrated power supply unit or by an optional battery unit, which has to be connected to the sampler by means of a connecting cable with screw threads. Charging of the battery is done with an external battery charger.

The system Gravikon PM 4 consists of:

- the basic instrument PM 4-2 in a metal housing with power supply and sound absorber
- an external 25.9 V battery unit (optional)
- the fine dust collection head for sampling of the respirable dust fraction (PM 4 F)
- the adapter tube for the fine dust collection head
- the total dust collection head for sampling of the inhalable dust fraction (PM 4 G)
- filter cassettes with closing cover
- a height adjustable tripod for the filter heads.

Basic Instrument Gravikon PM 4-2

The basic instrument generates a nearly pulsation-free air flow, which is regulated to a constant value of 4 m³/h independent of the degree of the filter loading up to 7.5 kPa pressure drop.



due to the integrated pressure- and temperaturecompensation variations of the atmospheric pressure because of different heights of measurement sites above sea level and meteorological conditions are compensated as well as temperature changes during sampling.

An illuminated LCD display with large figures and LEDs for the display of the operating state provide an improved operating comfort. The desired run time is programmable.

Sampling Heads PM 4

For the determination of the respirable dust fraction ("fine dust") the instrument is operated in the version Gravikon **PM 4 F** with a radially air intake and a centrifugal preseparator (cyclone) for separation of the respirable dust from the coarse dust.



Inhalable dust

The sampling of the inhalable dust fraction ("total dust") is carried out in the version Gravikon **PM 4 G** using the total dust collection head, which has a horizontal annular slit for the air intake.



Specifications PM 4:

Nominal flow rate:	4 m ³ /h ± 2.5%
Filter diameter:	70 mm
Sampling-time displayed	hh:mm
Weight: basic instr.:	3.3 kg
Dimensions (wxdxh):	210x90x340 mm
Battery unit	210x90x270 mm
Power supply:	In: 100-230 V, 50-60 Hz Out: 26 VDC, 2.5 A
External battery unit:	Li-ion, 25.9 V, 19.8 Ah
Protection class:	IP 54

Special Features Gravikon PM 4:

- High, regulated flow rate (4 m³/h)
- Keypad and large LCD-display for easy operation
- The sampler switches off automatically, when reaching the preset sampling time or, when the flow rate can not be kept constant within the required tolerance range. The elapsed run time is saved.
- Optional mains-independent operation, e.g. for the use at mobile work places
- Sampling heads for inhalable and respirable dust as well as for dioxins & furans