



SAMPLING
SOLUTIONS

MEGA SYSTEM

CALIBRATION
& METROLOGY

LIFETEK PMS SERIES



- Sequential system for fine dust particles
- Compliant with EN12341:2014
- LIFETEK PMS certified from -20 °C to 50 °C
- Up to 21 filters capacity
- Peltier conditioning system for sampled filters
- GSM Modem remote alarm management
- Ethernet port RJ45 for web server connection
- Available in Rack 19" version



CARE FOR THE
ENVIRONMENT



Tested AMS
Regular
Surveillance

www.tuv.com
ID: 000054060

LIFETEK PMS SERIES

Mega System has developed a sequential system for sampling fine dust particles in compliance with UNI EN 12341:2014.

LIFETEK PMS and LIFETEK 100 PMS are both TUV certified (ID 00000540060). They are compact, easy to move and resistant to weather conditions.

The LIFETEK PMS model is certified for outdoor use in temperatures ranging from -20 °C to 50 °C.

The LIFETEK 100 PMS model is certified for indoor use in mobile laboratories or in air quality control stations at temperatures ranging from 5 °C to 40 °C.

To ensure compliance with industry standards, the sampler must be equipped with a 2,5 m (maxim length) ventilated tube.

Monitoring of atmospheric particulates is carried out continuously using a gravimetric method on a 47-mmØ filter membrane (up to 21-filter capacity). Capacity is increased because used filters can be replaced with clean ones without interrupting the sampling.

The electronic flow control system manages sampling and ensures suction flow stability under 2,0% during sampling (average flow) and less than 5.0% of nominal flow instantaneous flow) – (UNI EN 12341:2014 – point 5.1.5.).

The sampling ventilation ramp system ensures a variation in temperature within 5 °C between the filter and sampling point with an ambient temperature above or equal to 20 °C (UNI EN 12341:2014 – point 5.1.4.).

The cabin is equipped with a Peltier conditioning system to keep the sampled filters at a controlled temperature – less than 23 °C (UNI EN 12341:2014 – point 5.1.8.).

A series of sensors controls the loading system for mechanically inserting clean filters, thus preventing jamming.

Pump capabilities exceed the standard sampling flow, which ensures a longer duration of palettes and reduces maintenance costs. Moreover, reduced sound emissions permit night time use of air quality control stations in residential areas.

The unit's GSM modem remotely manages sampling and alarms by text message (SIM not included).

The dry gas meter, on request, can be certified EN 17025.

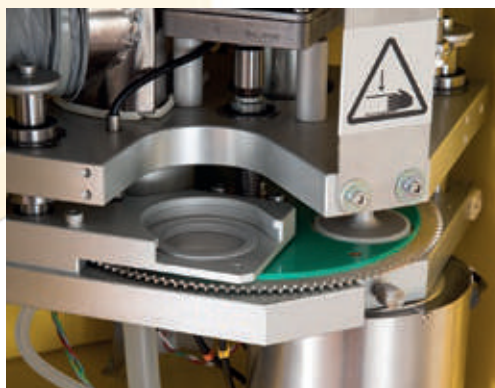


SAMPLING HEADS

Available for sampling PM₁₀ / PM_{2,5} / PM₁ / PTS with 3/4" gas connection.

TECHNICAL FEATURES

- Constant flow rate with automatic compensation for load losses. If there is a significant pressure loss on the filter, the system registers the event and transfers the sample to the next filter, without interruption.
- An electronic system adjusts the sampling flow rate in real time to keep airspeed constant at the fractionator inlet. This guarantees a constant volumetric flow rate of 2,3 m³/h in the sampling area where granulometric separation takes place.
- The filter storage protects the filters from dust and sunlight.
- The system guarantees load loss of less than 1% of the set nominal flow.
- Memory for archiving all data sampled.
- Backup battery to restart sampling in the case of power failure and to record the event.
- LIFETEK 100 PMS: a list of data containing all sampling parameters and sensor signals is available via an RS232 port. The operator may send this data to any data acquisition system at programmable intervals (from 1 to 99 minutes).
- The parameters can be certified, on request, by EN 17025 accredited laboratories.



SOFTWARE FEATURES

Environmental sampling at constant flow in compliance with European and American regulation.

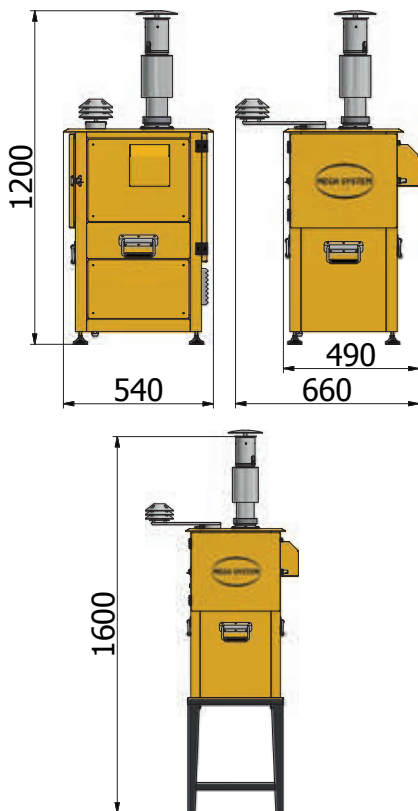
Sampling Modes:

- Time based program.
- Volume based program.
- Personalized time configuration of sampling and pauses.
- Automatic starting at 24:00.

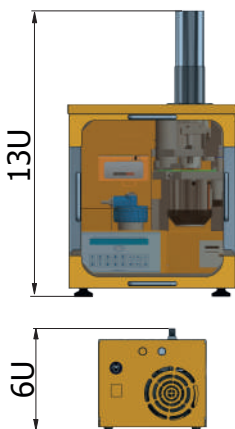
LIFETEK PMS SERIES

TECHNICAL SPECIFICATIONS

LIFETEK PMS



LIFETEK PMS RACK 19"



| MODEL | PMS | | |
|--|---|------------------------|----------|
| Compliance | | | |
| Certification | TUV approved EN 12341:2014 (ID 0000054060) | | |
| General | | | |
| General Filter storage capacity | Up to 21 filters | | |
| Filter diameter | 47 mm | | |
| Performance | | | |
| Pump type | Rotary vane | | |
| Flow rate range | 12÷70 L/min | | |
| Maximum vacuum | > 600 mmHg | | |
| Pump cooling system | Ventilation cooling system with dissipation coil | | |
| Gas meter/Resolution/Accuracy | G4 / 0,2 L / ± 2% | | |
| Volume: Resolution/Accuracy | 1 L / 2 % | | |
| Flow: Resolution/Accuracy | 0,01L/min / 2% | | |
| Sampling time | Uncertainty: < 30 s/gg | | |
| Interface, Data Archiving | | | |
| Display | Alphanumeric LDC (40x2) | | |
| Interface | RS232 – remote data acquisition USB host-data download | | |
| GSM Modem | ✓ | | |
| Environment | | | |
| Working temperature range | -20 ÷ +50 °C | | |
| Operating humidity | 95% rH | | |
| Operating atmospheric pressure | 800 ÷ 1100 mbar | | |
| Energy | | | |
| Power supply | 230 ± 10 Vac / 50 ÷ 60 Hz | | |
| Power consumption | 840 VA | | |
| Features | | | |
| Protection level | IP55 | | |
| Acoustic potential (8 m distance) | <33 dB(A) | | |
| Weight Lifetek PMS | 51 kg | | |
| Weight Lifetek PMS Rack 19" | 33 kg (Main unit)/ 15 kg (Pump) | | |
| Options | | | |
| Weather parameter sensors (speed and wind direction) | | | |
| Interface for connection to a TSP sampling system (Select 8) | | | |
| Integrated serial printer | | | |
| Stand for fixed position installation | | | |
| Dry gas meter certification EN 17025 | ✓ | | |
| Supplied With | | | |
| Technical manual | | | |
| Test report | | | |
| Temperature Sensors | | | |
| | Range | Resolution | Accuracy |
| Gas Inlet Meter | -20 ÷ +50 °C | 0,1 °C | ±1 °C |
| Environment | -20 ÷ +50 °C | 0,1 °C | ±1 °C |
| Filters | -20 ÷ +50 °C | 0,1 °C | ±1 °C |
| Filter storage | -20 ÷ +50 °C | 0,1 °C | ±1 °C |
| Pressure Sensors | | | |
| | Range | Resolution | Accuracy |
| Gas Meter Inlet | ± 1000 mmH ₂ O | 0,1 mmH ₂ O | 1% |
| Barometric | 800 ÷ 1100 mbar | 0,1 mbar | 0,3% |
| Vacuum (line load loss) | 0 ÷ 760 mmHg | 1 mmHg | 1% FS |