

The Ultimate Solution For Emissions Testing



Smart Filter Handling

The innovative filter holder enables identification, acclimatization, storage, transport and weighing all in one, without interruption or removal of the filter. It also acts as a Faraday Cage thereby reducing electrostatic influences.



Automatic Data Processing

The integrated data matrix code scanner automatically identifies the filter ID and ensures fast and easy operation, maintaining the security of your samples before and after processing.



Unmatched Accuracy

Sitting at the heart of the PFS-ONE filter robot, the XPR2U ultra-microbalance, with a readability of 0.1 µg, provides unmatched precision and reliability.

Filter ID	T ID	# Type	Value
PFS001_000001	1	REFERENCE	0.000000
PFS001_000002	1	REFERENCE	0.000000
PFS001_000003	1	REFERENCE	0.000000
PFS001_000004	1	REFERENCE	0.000000
PFS001_000005	1	REFERENCE	0.000000
PFS001_000006	1	REFERENCE	0.000000
PFS001_000007	1	REFERENCE	0.000000
PFS001_000008	1	REFERENCE	0.000000
PFS001_000009	1	REFERENCE	0.000000
PFS001_000010	1	REFERENCE	0.000000
PFS001_000011	1	REFERENCE	0.000000
PFS001_000012	1	REFERENCE	0.000000
PFS001_000013	1	REFERENCE	0.000000
PFS001_000014	1	REFERENCE	0.000000
PFS001_000015	1	REFERENCE	0.000000
PFS001_000016	1	REFERENCE	0.000000
PFS001_000017	1	REFERENCE	0.000000
PFS001_000018	1	REFERENCE	0.000000
PFS001_000019	1	REFERENCE	0.000000
PFS001_000020	1	REFERENCE	0.000000
PFS001_000021	1	REFERENCE	0.000000
PFS001_000022	1	REFERENCE	0.000000
PFS001_000023	1	REFERENCE	0.000000
PFS001_000024	1	REFERENCE	0.000000
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PFS001_000047	1	REFERENCE	0.000000
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PFS001_000049	1	REFERENCE	0.000000
PFS001_000050	1	REFERENCE	0.000000
PFS001_000051	1	REFERENCE	0.000000
PFS001_000052	1	REFERENCE	0.000000
PFS001_000053	1	REFERENCE	0.000000
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PFS001_000064	1	REFERENCE	0.000000
PFS001_000065	1	REFERENCE	0.000000
PFS001_000066	1	REFERENCE	0.000000
PFS001_000067	1	REFERENCE	0.000000
PFS001_000068	1	REFERENCE	0.000000
PFS001_000069	1	REFERENCE	0.000000
PFS001_000070	1	REFERENCE	0.000000
PFS001_000071	1	REFERENCE	0.000000
PFS001_000072	1	REFERENCE	0.000000
PFS001_000073	1	REFERENCE	0.000000
PFS001_000074	1	REFERENCE	0.000000
PFS001_000075	1	REFERENCE	0.000000
PFS001_000076	1	REFERENCE	0.000000
PFS001_000077	1	REFERENCE	0.000000
PFS001_000078	1	REFERENCE	0.000000
PFS001_000079	1	REFERENCE	0.000000
PFS001_000080	1	REFERENCE	0.000000
PFS001_000081	1	REFERENCE	0.000000
PFS001_000082	1	REFERENCE	0.000000
PFS001_000083	1	REFERENCE	0.000000
PFS001_000084	1	REFERENCE	0.000000
PFS001_000085	1	REFERENCE	0.000000
PFS001_000086	1	REFERENCE	0.000000
PFS001_000087	1	REFERENCE	0.000000
PFS001_000088	1	REFERENCE	0.000000
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PFS001_000091	1	REFERENCE	0.000000
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PFS001_000094	1	REFERENCE	0.000000
PFS001_000095	1	REFERENCE	0.000000
PFS001_000096	1	REFERENCE	0.000000
PFS001_000097	1	REFERENCE	0.000000
PFS001_000098	1	REFERENCE	0.000000
PFS001_000099	1	REFERENCE	0.000000
PFS001_000100	1	REFERENCE	0.000000

Efficient Processes

All weighing results and climatic data, with their corresponding time-stamps, are saved in XML documents. They can be automatically exported in different file formats or uploaded directly to a database.



PFS-ONE Filter Robot Automatic Weighing of Particulate Matter

The PFS-ONE particulate weighing systems set a new benchmark for automated filter weighing solutions. METTLER TOLEDO's innovative PFS-ONE compact bench filter robot guarantees the fast and precise determination of over 150 samples at an accuracy of up to 0.1 µg. The PFS-ONE assists companies in meeting the increasingly tight specifications of international emissions standards, now and in the future.

Save time and increase your efficiency with METTLER TOLEDO's intelligent PFS-ONE filter robot for emissions testing:

- High sample throughput of up to 1,000 per day
- Easy handling of up to 153 filters
- Full compliance with EU and US norms
- Safe data management
- Consistently accurate results

Environmental Climate Control

Due to its compact bench footprint, the PFS-ONE can be easily installed in existing laboratories, as well as many environmental cabinets.

In collaboration with our partner, HORIBA Automotive Testing Systems, we can offer fully integrated systems, including environmental climate control, software and filter robot. Comply with all international standards with the highly accurate temperature and humidity controlled system comprising:

- Integrated chiller unit
- HEPA filter
- PLC / HMI controller with touch panel
- Network interface for communication and data exchange
- Full software integration
- Optional Dew-Point mirror and reverse-osmosis kit for tap water



Technical Data

PFS-ONE Control

Hardware	Standard desktop PC - Windows 7 - Excel 2013 - 22" TFT Display - Barcode scanner for Filter IDs - Barcode label printer - Climatic weather station
Software	Application software PFS-ONE Control.NET Framework 4.0
Functionality	Process & filter explorer, visualization of climate data, action list, alarm detector
Data storage	XML file structure for filter, process and climate data, CSV format

PFS-ONE Filter Robot

Filter diameter	47 mm
Robot magazine positions	153 positions
Reference filter positions	1 positions
External calibration weights	50, 100, 200 mg (Class E2)
Balance readability	0.1 µg
Repeatability with filter (sd)	1...2 µg
Repeatability with filter typical (sd)	0.5...1 µg
Repeatability stainless steel test weight	≤ 0.25 µg
Settling time	< 16 s
Built-in balance adjustment	Automatic
Maximum load	2.1 g
Electrical weighing range	0...2.1 g
Linearity (electrical weighing range)	1 µg
Dimensions (approx. – W x D x H, cm)	95 x 64 x 65
Throughput	Up to 1000 weighings / day
Filter holders included	153
Technology	XYZ robot with stepper motor
Power supply	100-230 V / 50-60 Hz
Accessories	Antistatic ioniser

Climate Chamber

Version	Manual with path-through or automated Prepared for PFS-ONE-robot Upgradable from manual to automatic
Legislation compliance	ECE-R83, ECE-R49, EPA1065, CARB, WLTP
Cleanroom classification	ISO 4 (ISO 14644-1), equiv. class 10 (FED STD 209E)
Temperature control	22 °C +/- 1 K
Humidity control	9.5 °C +/- 1 K
Interface	TCP/IP network protocol (climatic data from integrated weather station and health status), USB (for data storage)
Balance isolation	Integrated vibration isolated granite
Footprint	W 1370 x H 1995 x D 960 (mm)
Working dimensions	W 930 x H 660 x D 650 (mm)
Power supply	208-240 VAC (L1/N/PE), 50 - 60 Hz 100 VAC, 50 - 60 Hz (Japanese version) max. power consumption 2 kW
Weight	Approx. 500 kg



METTLER TOLEDO Group

Laboratory Weighing
Local contact: www.mt.com/contacts

Subject to technical changes
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For more information