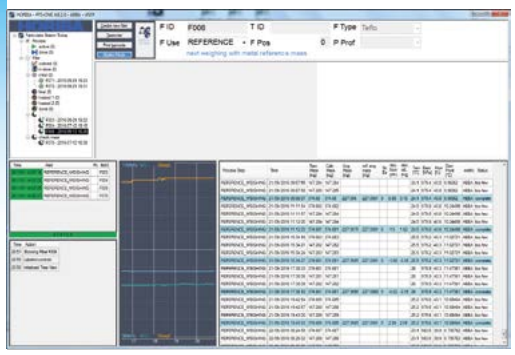
Automated Filter Weighing

# 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.



**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

METTLER TOLEDO

## 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<br>- Windows 7<br>- Excel 2013<br>- 22" TFT Display<br>- Barcode scanner for Filter IDs<br>- Barcode label printer<br>- 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<br>Prepared for PFS-ONE-robot<br>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 statiion 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 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

**www.mt.com/filter**

For more information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