

Sample Scanner

We help our customers to overcome today's cleanliness challenges in microtechnology. At Fastmicro, we believe you can accomplish breakthroughs in cleanliness control with fast, accurate and quantitative surface particle measurements.

Fastmicro enables process quality engineers to make reliable decisions on where and how to improve their cleanliness processes and deliver consistent quality products. And ultimately, achieve high equipment performance for their end users. To do this, we collaborate with the best to accomplish breakthroughs in cleanliness control.

Fastmicro Sample Scanner

The Fastmicro Sample Scanner measures surface particle contamination levels indirectly using samplers. These samplers benefit the user by enabling them to take particle contamination samples at any time on various products and assemblies.

CONSISTENT MEASUREMENTS IN PROCESS

1. **Fast:** imaging takes seconds
2. **Quantified:** traceable digital output
3. **Easy to operate:** operator independent
 - a. Qualification in production by operators
 - b. Analysis, for advanced users in R&D
 - c. Monitoring, continuous and SPC
4. **Accurate:** high-resolution measurement (quantity, position, size)
5. **Consistent:** objective measurements, time after time
6. **High throughput:** processing within a minute

Indirect measurements with samplers holder

The Sample Scanner even allows robust measurements in places that are difficult to reach, and on relatively rough surfaces. The samplers (as certified by partner) collect particles from the surface, without leaving measurable residue behind.

The Sample Scanner measures the samples within seconds, which enables our customers to achieve an operator's workflow of less than a minute.

The samplers can be transported in a clean sampler holder, re-measured and further analyzed.

A particle fallout upgrade option is available for measuring particle deposition with the 1" wafer holder.



Sample Scanner

Specifications

Fast and high production throughput

- Imaging in seconds; processed in seconds for 225 mm²
- Operator workflow in less than a minute

Data output

- **Analysis:** Quantity, Position and Size of particles
- Annotated image with particle detection overlay, plus '3D' signal representation of any operator-selected particle
- **Reporting:** export function including KLARF and Excel Files (including standard bin sizes)
- Optional **qualification** report in UI and PDF, according to ISO standard 14644-9
- **Data exchange** via USB, or via an optional ethernet option (for example connection to database through XML)

Easy to operate

- Fit for use by operators in manufacturing and R&D environments

Detection range

- From 0.5 µm PSL particles

Reproducibility

- 90% cumulative particle count, when replacing a sampler, with PSL particles from 0.5 µm
- Also as repeated result between scanners

Sizing accuracy

- Within 20% with PSL particles

Nondestructive – no cross contamination to samples

- Nondestructive measurement and sample can be remeasured
- No contact with sample measurement area
- No cross-contamination due to sampler
- No particle generation by the scanner in the measurement area (no moving parts)

Requirements on sampler and sample handling

- Above scanner requirements can only be achieved with the use of certified samplers, fallout holders and direct measured products
- Sampler contamination levels must at least be 10 times lower than the qualification level of the customer
- Combined use in clean environment, i.e. cleanroom ISO 7, Class 10,000 or better
- Card sampler holder for indirect measurements is included, fit for Particle Measurement Cards (PMC 2.0 in a box, as certified by partner)
- Optional with 1" wafer holder, for particle fallout measurements

Size & weight

- Scanner size 615 x 300 x 460 mm, weight 16 kg
- Transport packaging: size 710 x 530 x 670 mm, weight 45 kg

Model

- FM-PS-SAS-V01

Version: V3.1223


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fastmicro
cleanliness control