



CLEAPART-100

Dynamic Particulate Deposition Rate Monitoring Device



KEY FEATURES

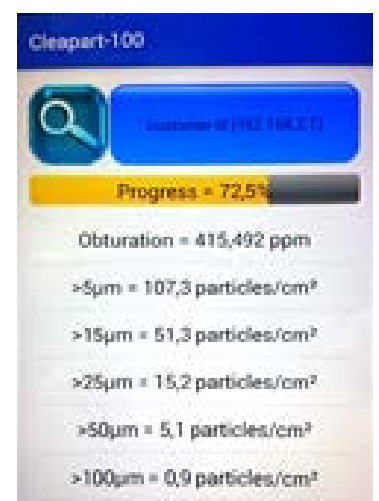
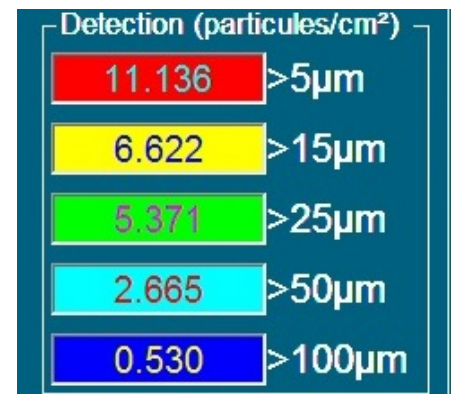
- Passive detection of deposited particles (fully representative)
- 100 cm² collection surface
- Dynamic recording of the deposition rate
- Particles size classification
- **Obscuration/obturation** factor
- Cleanroom suitability

When working with sensitive surfaces such as optics, lasers, medical devices, pharmaceutical & cosmetic products, it is critical to monitor particle deposition. Cleapart is a passive collecting device, working autonomously to monitor particle contamination on sensitive surfaces with its large 100cm² collecting area.

Its high resolution camera, coupled with a microscope objective, scans the large collection surface (100cm²). The particles are detected, counted and sorted depending on their size (>5µm, >15µm, >25 µm, >100 µm) by the embedded electronics. The particle deposition rate can be displayed in particle density (particles/cm²), particle deposition rate (particles/cm²/h) & obscuration factor (ppm or ppm/h). Data are transmitted in real time to the monitoring station (standard PC or mobile devices).

Several control screens are available for the user, such as information regarding the particle deposition rate to detect contamination events over time (in particles/cm²/hour) or the cumulative contamination from a defined date (in particles/cm²). The recorded pictures can be analyzed with powerful graphical tools.

Alarms can be configured to warn users of an event (either in particle deposition rate or particle density), to ensure the cleaning frequency is optimized, thus offering a high quality, efficient and safe production without disturbing the workflow around the sensitive products or patients.



SENSOR SPECIFICATIONS

- Pixel size : 2µm
- Number of pixels / scan: ~ 2Tpixels
- No periodic calibration needed (self-calibration)

DATA OUTPUT

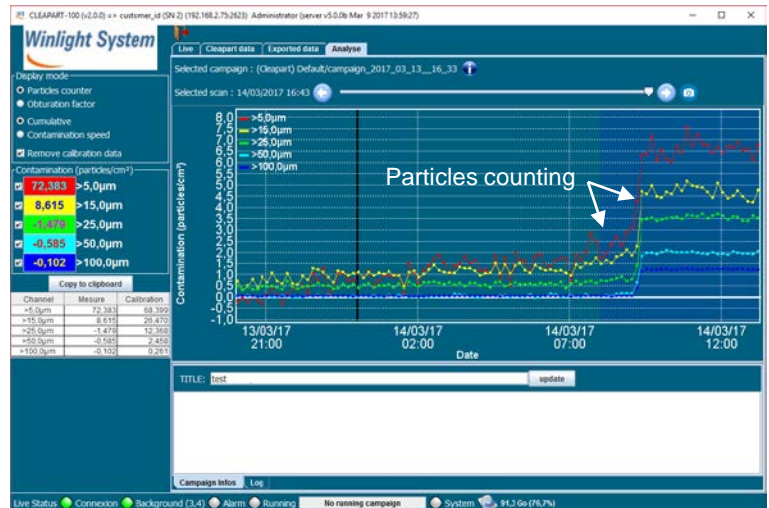
- Detected particles : $\geq 5\mu\text{m}$
- Classification according to your predefined standards : [>5 ; >15 ; >25 ; > 50 ; $>100\mu\text{m}$] (IEST 1246D as an example or ISO14644-9)
- Measurement time: ~ 7mn/scan (100cm²)
- Programmable scan frequency
- Particle deposition density (ISO 14644-3 and ISO14644-9)
- Particle deposition rate
- Obscuration Factor (ECSS-Q-ST-70-50-C)
- Self-calibration
- Data sorted on table
- User programmable alarms
- First and last scan images available

SOFTWARE CONTROL

- Controlled by front panel or remote device
- Remote workstation software (Windows):
 - System configuration
 - Data monitoring and analysis
 - Data management (storage, export...)
- Mobile Software (Android)
 - Data monitoring
 - Alarm notification

COLLECTING SURFACE

- 100 cm² - Horizontal or vertical positioning
- SiO₂ glass material (other transparent glass available upon request)
- Cleanable surface (cleaning procedure provided)



PHYSICAL SPECIFICATIONS

- Dimensions: 210x210x230mm
- Weight: <7kg
- Closed enclosure

ENVIRONMENTAL SPECIFICATIONS

- Automatic test for camera dazzle
- Cleanroom suitability : ISO 4 (ISO14644-1, GMP)
- CE compliant

ELECTRICAL SPECIFICATIONS

- Power Supply : 100-240 V
- Power < 30W

NETWORK SPECIFICATIONS

- Gigabit Ethernet
- WIFI 802.11 b/g/n ("no WIFI" version also available)



CLEAPART-100 is manufactured under licence from:

