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## Particle Deposition Monitor

### ISO 14644-17:2021

The PDM system consists of a full featured line scanning microscope camera. The unit communicates over network to the Vision Analysis Software located on a laptop. Up to 3 units can be hooked up for real-time data generation. Off line measurement of witness plates only take 15 seconds therefore measuring a set of 100 disks within an hour is a realistic job. Witness plates can be carried at site and become exposed resting in the exposure box. This allows for data collection at several sites simultaneously requiring only one PDM system.

### What is measured by the PDM?

Basically the change in surface cleanliness is measured. A disk is cleaned by hand and then by means of optical scanning the position and size of all remaining particles or other defects on the disk is captured. By means of software a mask is generated with the purpose of blanking out all the found particles. Due to exposure in an environment with particles fall out the surface cleanliness will change. By applying the mask the original particles on the disk are blanked out and thus the freshly fallen particles can be found and characterized by size, numbers and fiber attribute.

### What can be learned from the results?

Operator feedback is now possible. The amount of deposition due to work done can be found in the results. The effect of cleaning with a wipe can be found by means of comparing the remaining cleanliness after cleaning by means of the wipe. As the type of dust does vary per site, the effect can be found specifically for the type of dust being the dust of importance.

### For inquiry please call us

You will get in contact with the development team of this product providing the information as required.

Call us

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# GET A GRIP ON SURFACE CLEANLINESS BY MEASURING DEPOSITION

## Some key specifications

- Large 50 sqcm detection area allows for measurements in very clean environments, This combined with a High detection resolution with mask system allows detection of single particles on a large surface.
- Real time measurements providing event catching every minute with a resolution of one particle being the, Smallest detectable particle of  $\geq 5\mu\text{m}$ .
- Counting sizing and positioning of all particles on the witness disk, combined with Fiber counting and images of all particles on the disk.
- The borosilicate disk can be sterilized in order to measure the ratio between deposition and deposition with a bio content. Witness plates in exposure boxes allow data collection without instrument.
- A large selection of reporting values is available such as i.e. PAC, PDR, Illiquert etc. Specials can be done.
- Use cases are automotive industry cleanliness during assembly, Semiconductor industry monitors deposition during the assembly of machines, Space industry safeguards the contamination budget of optical instruments.
- There are several jobs that can be carried out with the use of a PDM system. The origin of the dust and the appearance frequency will become a parameter allowing to get the grip on particle deposition.

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