



# **Request for Proposal**

**for**

**Purchase of Surface Particle Counter  
for VELC Project**

**Indian Institute of Astrophysics  
Bangalore**

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## 1. Introduction

Surface particle counter is a portable particle counter that directly measures and counts particles and dust on surfaces while leaving the surface unchanged.

## 2. Location and Environment

The system/Instrument will be used in a class 10/100 (ISO4/5) cleanroom at Prof.MGK Menon Lab for Space Sciences at CREST Campus of IIA, Hosakote.

## 3. General Requirements

It is used to View the surface in real-time and the image processing software shall automatically count and sizes particles. This data, including the live-screen, shall be immediately viewed on the integrated screen, printed or stored for future reference and comparison. The real image to allow detection of size, location and shape of existing particles.

It shall be configured to detect particles on various material surfaces such as stainless steel, titanium, aluminium, invar, plastic, glass, and may be set up to a given measuring task by individually defining alarm thresholds.

## 4. Purpose

1. Detection of process-related contamination generated during manufacturing .
2. Inspection of the state of cleanliness of:
  - Components
  - Subassemblies
  - Systems and equipment
  - Assessment of cleaning process

## 5. Technical Requirements

Portable particle counter for surfaces

- For Measuring technology according to ISO 14644-9
- For Measuring from 2 $\mu$ m to 4000 $\mu$ m Resolution: 8.5  $\mu$ m
- For Analysis: particle size and number
- Particle size according to ISO standards
- Measurement area: 5mm x 7mm or 15mm x 20mm
- Measurement time: <5 seconds
- Data output: touch screen and live image
- Necessary Interfaces like USB, Ethernet etc.,
- Housing: Class 10/ISO 4 cleanroom compatible housing and accessories
- Printer:Thermal print, paper width 55mm



- Particle Readout: Particles / Size Classes acc. To ISO 16232
- Particle Detection Range: From 2 $\mu$ m
- Particle Alarm Limits: Flexible settings
- Readout: Screen display, protocol printout, USB
- Operating Temperature Range: 2°C to +30°C
- Storage Temperature Range: -20°C to +60°C
- Power Supply: 110-240V AC 50/60Hz
- Video Display Format: BNC, BAS signal, 75Ohm

## **6. Warranty & Support**

The vendor shall provide a warranty for the entire system for the period of 1 year from the date of final acceptance at site against any manufacturing or faulty components