MEGA SA200 SERIES

PARTICLE MEASUREMENT SYSTEMS FOR USE IN SEMICONDUCTOR, SOLAR, AND EMERGING MANUFACTURING APPLICATIONS

- **Flexible:** supports single or dual dilution for slurries too concentrated to analyze
- **Configurable:** user-selected particle size threshold and analytic reporting
- **Reliable:** delivers accuracy, reliability and repeatability customers have trusted for many years

SYSTEM OVERVIEW

The SA200 Series Slurry Analytic Particle Measurement systems provide portable particle size and/or distribution analysis. Systems include dilution control and flush mechanisms to enhance precision and accuracy. Single dilution and staged dilution systems are available for slurries too concentrated to analyze directly. Flush features can support either DI or chemical flush media.

Configurations may contain single or redundant particle counter lasers and lasers with different discrimination ranges. Systems can be configured to provide output data to a dedicated PC or to the integrated IPC in a host Mega slurry or chemical systems.

These systems assist in monitoring:

- raw material, batch to batch changes
- filter performance
- long-term batch degradation, and
- other operating performance parameters.

KEY FEATURES

- Point-of-use, global dispense, and batch sampling capabilities
- Multiple single-laser sensors configured in series for particle verification
- Detect particles 0.3µm to 20µm; configuration dependent
- Adjustable particle size counting bin classes for increased size characterization clarity and granularity
- Single stage (up to 1,000:1) or dual stage (up to 1,000,000:1) dilution capability
- Manual dilution control and flush mechanisms
- Monitor long-term batch degradation and filter performance
- Main components constructed of chemical resistant PFA wetted plastic with 316 SS flow meters; shell constructed of white Polypropylene (optional FM4910 CPVC)

BENEFITS

- Avoid costly yield reductions resulting from excursions and wafer scratching with real-time characterization and analysis of particle sizes
- Low coincidence errors result in accurate particle size characterization and better process control
- Manual operation or dedicated PC options can be applied with minor modification to existing equipment
- Cost of ownership reduced by multiple slipstream design options and cart mobility
- Small footprint for easy placement anywhere in the process

MARKETS SERVED

- Semiconductor
  - Post-CMP
  - Low-solids CMP
  - ECD
- Solar/PV
- LEDs
- Aerospace

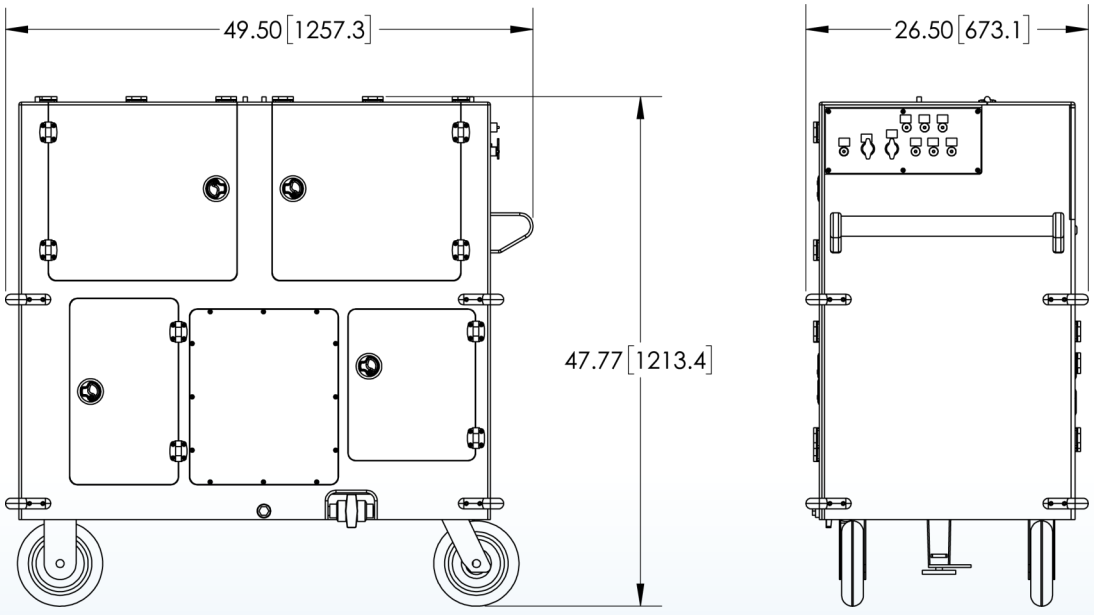
[1]Reliability figures represent typical performance

SYSTEM CONFIGURATIONS

	Particle Size	Slurry Sources	First Stage Volumetric Dilution Ratio (Concentrate / Dilutant)	Second Stage Volumetric Dilution Ratio (Concentrate / Dilutant)	Final Dilution Ratio (First Concentrate / Total Dilutant)	Number of Series Particle Counters	pH Adjustment	Grab Sample Capability
SA220 Model 101	0.5 to 20.0µm	1	0.03 to 0.55*	N/A	0.03 to 0.55	2 to 3 (Adjustable)	Y	Y
SA220 Model 102	0.5 to 20.0µm	2	0.03 to 0.0025**	0.03 to 0.0025**	0.03 to 6.25E-6	1	N	Y
SA220 Model 103	0.5 to 20.0µm	1	0.03 to 0.55*	N/A	0.03 to 0.55	2	Y	Y
SA222 Model 101	0.3 to 3.0µm	1	0.03 to 0.0025**	0.03 to 0.0025**	0.03 to 6.25E-6	2 to 3 (Adjustable)	N	Y
SA222 Model 102	0.5 to 20.0µm & 0.3 to 3.0µm	1	0.03 to 0.0025**	0.03 to 0.0025**	0.03 to 6.25E-6	1 of Each	N	Y

*Assumes concentrated feed isolated at 3 ml/min (0 - 5.5ml/min range) with a minimum UPW flow rate of 10ml/min (0 - 100ml/min range).
**Assumes concentrated feed isolated at 3 ml/min (0 - 5.5ml/min range with a minimum UPW flow rate of 180ml/min (150 - 1200ml/min range)

SYSTEM DIMENSIONS



Dimension	Measurement in inches [mm]
Height	47.77 [1213.4]
Width	49.50 [1257.3]
Depth	26.50 [673.1]

*Depiction illustrates minimum footprint excluding door swing areas.
Required maintenance area defined by S8 may exceed what is shown.

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