



MEGA SA100 SERIES

HIGH ACCURACY SLURRY ANALYTICS FOR USE IN SEMICONDUCTOR, SOLAR, AND EMERGING MANUFACTURING APPLICATIONS

- **Flexible:** Retro-fit to existing tool sets or re-purpose to support new chemistries
- **Configurable:** Custom-tailored to meet required slurry health monitoring or chemical characterization
- **Reliable:** Delivers accuracy, reliability and repeatability customers have trusted for many years

SYSTEM OVERVIEW



The Mega SA100 Slurry Analytics Titration system provides a flexible, wide range of measurements to monitor, improve and troubleshoot processes increasing product yields when a quantitative process composition is known. Variations that can affect product quality are immediately apparent and can be quickly corrected before product losses.

By passively accepting slipstream samples from a MegaFlow (MF), MegaBlend (MB), Chemical Blend & Distribution (CBD) or other chemical / slurry distribution systems, the Mega SA100 automatically analyzes, reports concentration to the parent process system, and in some instances, replenishes the chemical based on the results obtained.

The SA100 system employs carefully controlled chemical reactions to selectively determine the presence and concentration of an analyte of interest in a chemical or slurry mixture. The systems are programmed with carefully chosen assays, equipped with specialized sensors and accept very specific reagents to ensure the measured chemical is uniquely identified in the matrix.

KEY FEATURES

- Quantitative chemical concentration obtained with full on-line chemical monitoring
- Programmable recipes carry out sampling and replenishing with steps for delays, purges to clean lines, sample extraction, and constituent replenishment
- Up to 4 sample input streams selectable for analysis
- Reagent trays and analyzer mounted on sliding trays to enable easy maintenance access
- Low and high chemical concentrations analyzed with multiple on-board reagents
- Automatic sample extraction from a pressurized tool source
- Chemical specific assays and electro-chemical sensors analyze the sample
- Automatic flush/purge with manual override activation
- Can serve one or more chemical/slurry sources
- Semi S2 compatible

BENEFITS

- Product yields are increased when a quantitative process composition is known
- Constituent decomposition is tracked during the entire lifecycle of product within the blend and dispense system
- Quickly correct process variations before loss of product quality
- A proven reliability of 99.9% availability with a MTBF > 5000 hours
- Improve process knowledge, reproducibility, and uniformity
- Insurance against batch loss

MARKETS SERVED

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

TYPICAL FACILITY REQUIREMENTS

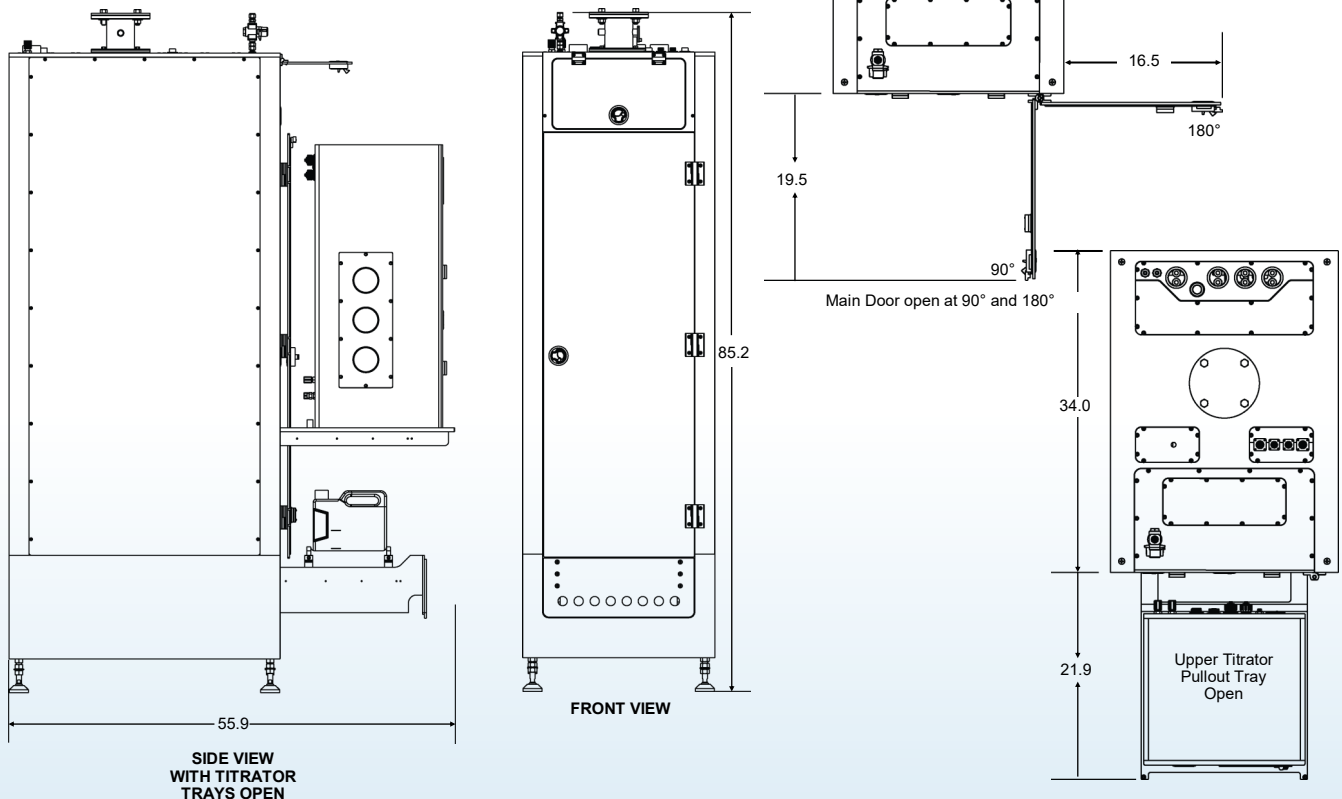
Utility	Capacity	Connection Type
N2 Supply	2 scfm @ 90 psig	3/8" Compression SST
DI Water Supply	5 gpm @ 30 psig	3/8" Flare
DI Water Return	Field Set	3/8" Flare
Gravity Drain	Gravity	2" FNPT Half Coupling
Process Drain	15 lpm @ 30 psig	1" FNPT Full Coupling
Exhaust	85.3 scfm @ -2 H2O	3" Pipe Flange

SAFETY FEATURES

- Segregated electrical and chemical compartments
- Access doors and software interlocks which will place the system into a safe standby mode when the door is opened
- Audible and visual warnings and alarms
- System exhaust presence detector, which verifies that the system is being properly exhausted to the facility exhaust system.
- Leak detection which detects any leak within the analyzer's enclosure.
- Emergency Machine Off (E.M.O.) button

SYSTEM DIMENSIONS

Dimension	Measurement in inches (mm)	Measurement with Doors/Tray Open
Height	85.2 [2164.1]	N/A
Width	24.0 [609.6]	90° - 24.0 [609.6] 180° - 40.5 [1028.7]
Depth	34.0 [863.6]	55.9 [1419.9]



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