

MEGAFLOW DUO

HIGH-PERFORMANCE PARALLEL FUNCTION BLEND AND DISTRIBUTION SYSTEM FOR USE IN SEMICONDUCTOR, SOLAR, AND EMERGING MANUFACTURING APPLICATIONS

- **Flexible:** system operation capabilities based on manufacturing demands
- **Configurable:** supports multiple global loop configurations
- **Reliable:** field-proven reliability for high-volume manufacturing

SYSTEM OVERVIEW

The MegaFlow Duo is an adaptable modular slurry blend and delivery system. The modularity of the MF Duo allows for two stations to operate in parallel, blending and dispensing from the same tank. This combination can provide blended chemistry to a single global loop, two global loops (one active/one idle), or two separate global loops simultaneously depending on the total make-up rate requirements. The two-station MF Duo allows for one station to service an assigned global loop while the second station is operated in blending, global loop flush, standby, or maintenance mode, allowing for virtually 100% uptime of blended slurry supply to the point-of-use.



KEY FEATURES

- Stations alternate in blend and dispense function
- Up to five volumetric recipes can be stored by the operator
- Staged slurry filtration through single or dual loops
- Flush & purge functions can be set to occur automatically between batches at variable batch intervals or during manual maintenance mode
- Blend or distribution sampling accessed and initiated by the operator during automatic or manual maintenance modes
- Additional metrology available: conductivity, density, pH, large particle detection, and H₂O₂ concentration

MARKETS SERVED

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

BENEFITS

- Virtually 100% uptime of blended slurry to point-of-use
- Fixed slurry addition ratio capabilities
- Blended slurry analyzed and qualified to predefined standards for accuracy, reliability, and precision
- A complex sequence of steps ensures minimal pressure fluctuation during station-to-station transfer
- Redundant filters and pumps to maintain loop supply when filter cartridge or pump change-out required

SYSTEM CAPABILITY

Specification	Capability
Metrology Blend Accuracy	±0.002 gr/cm ³ for density* ±0.002 to 0.05 wt% for H ₂ O ₂ -based applications
Blend Make-up Rate	Up to 8 lpm**
Dispense Flow Rate	Variable based on pump type and configuration***
Availability	> 99.9%*

* Manufacturer specification; actual accuracy will vary based on specific chemistry blend.
 ** Specifications will vary depending on application and configuration.
 *** Consult MFS sales representative for conditions with higher flow and pressure requirements.

SYSTEM OPTIONS

- High-accuracy chemical addition
- Tank mixers
- In-tank cooling
- High-dilution slurry
- Various sized blend-distribution tanks

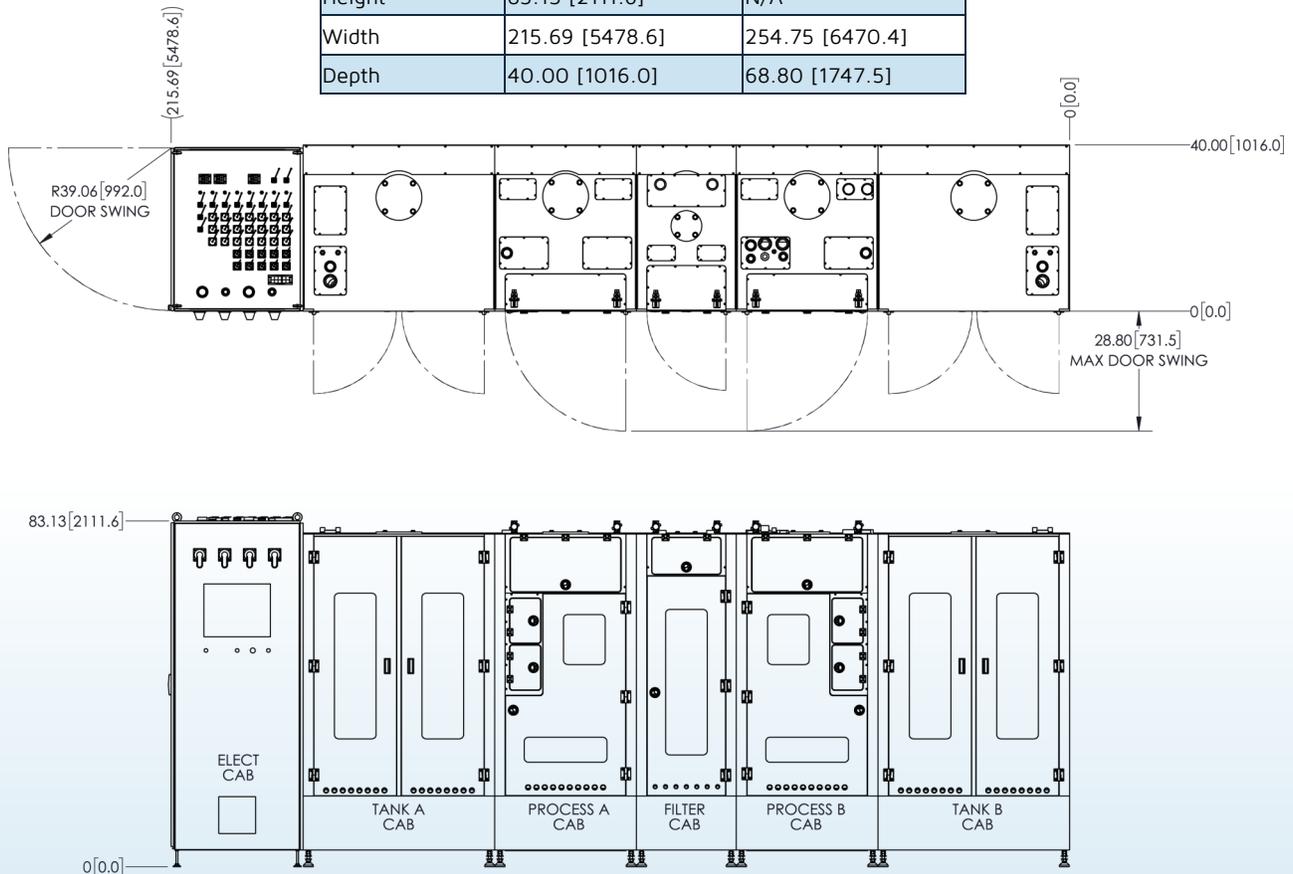
Note: Not all options have been listed. Contact a Mega Fluid Systems sales representative for additional information.

SAFETY FEATURES

- Segregated electrical and chemical compartments
- Access doors and software interlocks
- Audible and visual warnings and alarms
- Leak detection
- Local and remote EMO

SYSTEM DIMENSIONS

Dimension	Measurement in inches [mm]	Measurement with Doors Open
Height	83.13 [2111.6]	N/A
Width	215.69 [5478.6]	254.75 [6470.4]
Depth	40.00 [1016.0]	68.80 [1747.5]



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