

FUSION™ 

Versatile Mobile Chemical Blending & Dispense System, the Mini Mix

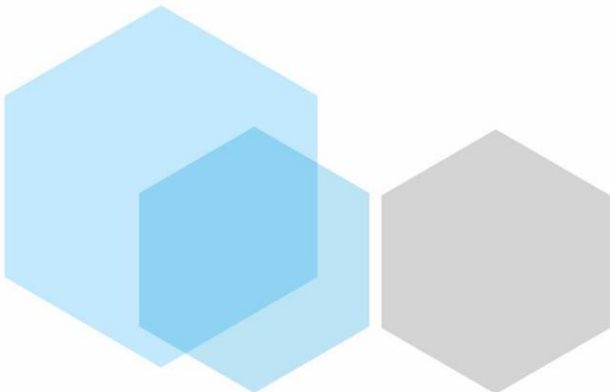


The DFS Fusion™ Mini Mix system is designed for point of use (POU) near tool blending and supply of CMP tools or other low flow, low consumption applications where Process Engineering may require development of chemical recipes or in application where low flow blended material is required.

The Mini Mix is engineered to blend from customer-supplied chemical source and UPW. Blends are verified through the blend specific on-board metrology set. Internal cooling coils control temperature with the HDPE day tank. The system can also be programmed to automatically keep the day tank full from a connected external source. The system uses a maglev pump for chemical supply as well as blend recirculation. An on-board pneumatic pump handles chemical source transfer and pumped waste.

Advantages

- ▶ Fully automated system
- ▶ Low cost of ownership
- ▶ Ability to perform R&D testing while permanent system comes online
- ▶ Adjustable recipes through the user-friendly HMI
- ▶ Monitors key metrology data points
- ▶ Fully portable allowing for maximum flexibility in placement
- ▶ Space efficient design



Chemical
Blending

DFS MINI MIX SYSTEM

Features

- ▶ 3-point load cell system to monitor and blend chemical
- ▶ 10-inch filter housing
- ▶ Conductivity for blend validation
- ▶ Flow-through pressure transducers
- ▶ 114L HDPE blend/day tank with cooling coils
- ▶ Automatic system flushing
- ▶ Pressure and flow monitoring
- ▶ 10L to 200L carboy or drum connection
- ▶ Maglev pump
- ▶ Non-intrusive level sensors
- ▶ Ultrasonic flow monitoring
- ▶ Waste pump for system draining and maintenance
- ▶ Solenoid valves with system force capability
- ▶ All wetted flow paths are PFA, PTFM, or PTFE
- ▶ Polypropylene cabinet materials

Safety

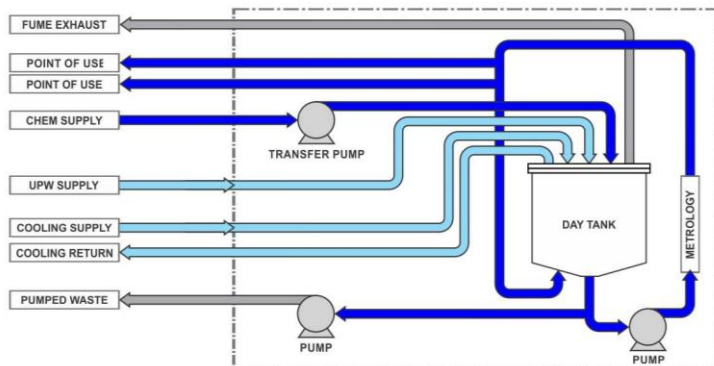
- ▶ Cabinet leak detection and alarming
- ▶ Cabinet exhaust monitoring and alarming
- ▶ Cabinet door interlocks
- ▶ Local and remote EMO capability
- ▶ Maintenance points for system purging and draining
- ▶ Cabinet contains 110% of the largest volume
- ▶ SEMI S2 Compliant
- ▶ UL 508A Certified

Options

- ▶ Blending by weight
- ▶ Blending by volume
- ▶ Bulk chemical addition
- ▶ Refractive index for blend validation
- ▶ PFA blend tank
- ▶ FM4910 cabinet materials
- ▶ SEMI S2 Certified

Controls

- ▶ PLC and HMI
 - On-screen system P&ID
 - Maintenance and shutdown monitoring
 - Force screens for maintenance and troubleshooting
 - Password protected screens
 - Manual activation of valves/pumps
- ▶ Connectivity to system PLC Ethernet networks
- ▶ Communication with PC via PLC network



Model	Fusion Mini Mix
Applications	Acid, bases, oxidizers, slurry
Flow Rate	12 LPM
Pressure Control	+/- 0.3 psig
Flow-Based Blend Accuracy	+/- 0.1% relative
Wt-Based Blend Accuracy	+/- 1% relative
Footprint	30"Dp x 36"W x 80"H

Facility Requirement	Utilities
Ultrapure Water (UPW)	7 LPM
Clean Dry Air (CDA)	15 SCFM
Exhaust	200 SCFM
Process Drain	19 LPM
Power	208VAC
Cabinet Drain	Gravity



DFS Diversified Fluid Solutions
A Critical Process Systems Group Company

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