DATA SHEET

# DFS FUSION™ MINIMIX™ PLUS

## Versatile Mobile Chemical Blending & Dispense System, the Fusion On-Demand MiniMix+

The DFS Fusion On-Demand MiniMix+ transfers chemical from an interchangeable 5-gallon pail or bulk supply to the internal On-Demand Blender. Chemical 1 is supplied through the internal vessel or bulk supply. UPW and Chemical 2 are supplied using the Facility supply source.

## Advantages

- Ability to perform R&D testing while permanent system comes online.
- Process engineers can easily adjust recipes through the user-friendly HMI as well as monitor key metrology data points.
- Compact and portable design.
- Auto flush of internal plumbing and blend streams.
- On-Demand blending for accurate, repeatable blending and validation.
- DFS high efficiency proprietary blend cell for homogenized mixing and linear flow smoothing.

## How it Works

Through the On-Demand™ Stream, DFS Blend Cell, and select analytics, the constituents are blended to drain until the target analytics have been validated. Once the target analytics are validated, the blend supply is diverted to the 38-liter HDPE day tanks (optional PFA) and filled to the full weight.

After the blend constituents have been added to the blend tank, the blend is allowed to recirculate through the internal recirculation loop and select analytics until the blend is validated for a second time. Once the blend has been verified, the system is allowed to go online to the production area. The system has the capability to supply up to 5 connection points. The system can also be set up to do a “keep-full” operation with the On-Demand blender blending on top of the existing chemical blend in the online tank, allowing the system to continually supply the production tool without interruption. The system also has the capability to automatically adjust the blend in the tank if the onboard analytics determine the blend to be out of specifications.

Chemical Blending

DFS Diversified Fluid Solutions
A Critical Process Systems Group Company

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## Cabinet

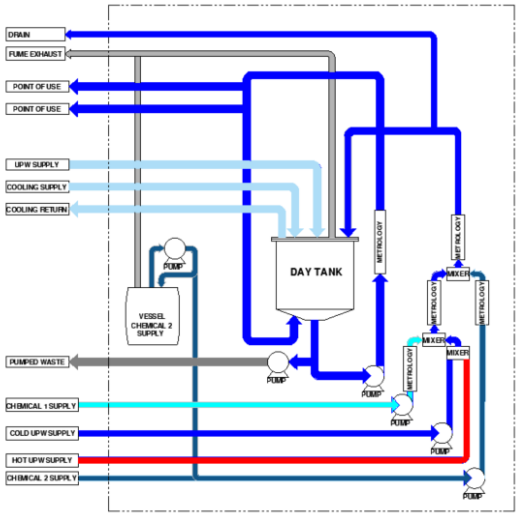
- Fully automated system
- Inline On-Demand™ blending
- Metrology is selectable for blend confirmation; standards include conductivity and RI metrology
- 37L HDPE blend/day tanks
- 3-point load cell system to monitor levels and blended chemicals
- Flow and pressure monitoring
- Cabinet leak detection and alarming
- Automated flushing and drain sequences
- UPW spray gun for maintenance
- Cabinet door interlocks
- Magnetic levitation pumps for blend and distribution
- Waste pump for system draining and maintenance
- Maintenance points for system purging and draining
- Automated sampling chamber
- Solenoid valves with manual bypass
- All wetted flow paths are PFA, PTFM, or PTFE
- Cabinet contains 110% of the largest reservoir
- Space efficient design
- UL 508A certified

## Options

- 10-inch filter housings
- PTFM lined tank cabinet
- FM4910 materials
- Global Loop

## Controls

- PLC & HMI
  - On-screen system P&ID
  - Maintenance and shutdown monitoring
  - Force screens for maintenance and troubleshooting
  - Pump runtime monitoring
  - Password protected screens
  - Manual activation of valves/pumps
- Full Blend configuration
- Ethernet communication
- Local and remote EMO capability




| Model | Fusion MiniMix+ |
|---|---|
| Applications | Acids, bases, oxidizers |
| Internal Flow Path | 1/2" and 3/4" |
| Flow Rate | 20LPM (internal flow path) |
| Pressure Control | +/- 0.3 psig |
| Blend Accuracy | +/- 0.1% relative |
| Blend Supply | 1200 mL/min per connection (5 total) |
| Materials Flow Path | PFA Teflon™ pipe and tubing |
| Cabinet Materials | Polypropylene |
| Safety | SEMI S2 compliant |
| Footprint | 43"Dp x 30"W x 72"H |
| Blend/Day Tank | HDPE |

| Facility Requirement | Utilities |
|---|---|
| Ultrapure Water (UPW) | 20 LPM |
| Nitrogen ($N_2$) | 80-100 psi |
| Clean Dry Air (CDA) | 80-100 psi |
| Exhaust | 80-140 SCFM |
| Process Drain | 20 LPM |
| Power | 208VAC, 30A |
| Cabinet Drain | Pressurized |
| Hi Res Supply | 20-40 LPM |
| Chem 1 and Chem Spare | 0.25 LPM |

FUSION™

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