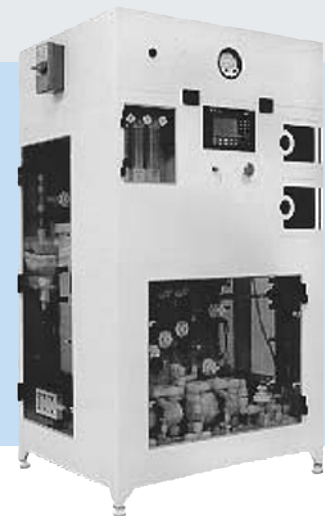


MegaFlow™ IIIB

Precision Blending and Distribution System

- » Modular scalable design with flexibility for remote locations
- » Flow meter blending
- » 1 GPM make-up rate
- » Flow rate: 2.5 GPM @ 20 psi (regular flow)
- » Standard analytical package with flow, temperature, pH and density sensors
- » Higher uptime with redundant pumps
- » Pump delivery minimizes shearing of slurry
- » SEMI S2-93 reviewed

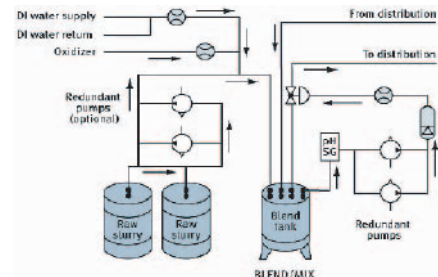


System Features

The MegaFlow IIIB is the ideal compliment for small and medium polisher lines. The modular scalable design allows for expansion and addition of more units as needs and technology advance. The MegaFlow IIIB provides slurry blending with user-selected recipes to blend slurry, DI water and up to two chemical additives. Blended slurry can be distributed directly to the point-of-use or to a distribution station. As the beneficiary of advanced R&D testing, the IIIB has been developed to handle the most difficult slurries. The IIIB can be upgraded to a MegaFlow IIIC with the addition of a distribution module.

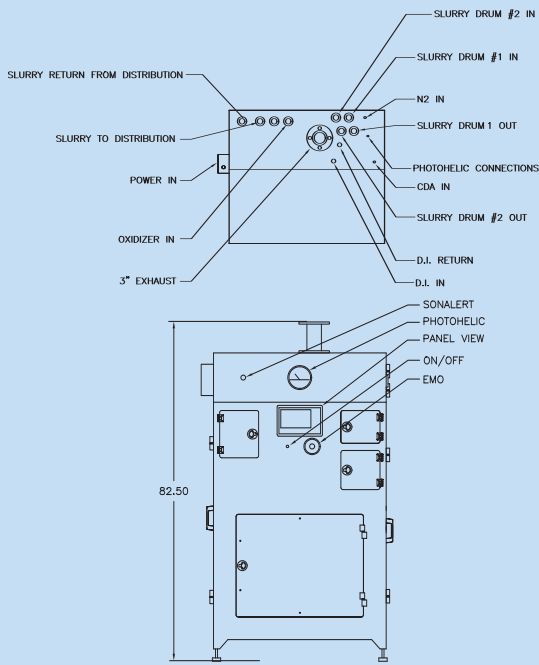
Blend/Mix/Distribution station

- Primary and Redundant Teflon™ pumps with auto-changeover
- Spray bar for auto flush of blend tank
- Humidified nitrogen blanket to minimize slurry drying in blend tank and slurry drums
- Sample valve in recirculation and mixing line
- Flow sensor, sample port, and recirculating DI spray gun
- Enclosed 30 gallon blend/distribution tank



Options

- Redundant drum pump
- External filter module
- FRPP, CP5 or CP7D cabinets
- MegaJet™ blending feature
- Additional chemical input channels
- CE Mark 220V,50Hz
- Slurry drum and blend tank mixers
- PFA lined blend/distribution tank
- Drum cabinets
- Slurry metrology slipstreams
- Distribution module for future upgrades
- Automatic back pressure regulation of global loop



Model	MF IIB
Make-up rate	1 GPM
Uptime	99.5%
Distribution Tank	30 Gallons
Cabinet materials	Polypropylene
# of chemical inputs	1 Standard, 2 optional
Dispense rate	2.5 GPM @ 20 psi
Footprint	42" x 36" x 82"

Facility requirements	MF IIB	Connection Type
DI water	5 GPM @ 25 psi	3/4" Teflon™ Flaretek
N ₂	2 SCFM, 90 psi	3/8" SS Swagelok
CDA	10 SCFM, 80 psi	1/2" SS Swagelok
Exhaust	85-95 SCFM, 2" H ₂ O	3" Pipe flange
Process drain	30 psi, 5 GPM	3/4" FNPT polypro
Power	120 VAC, 15 AMP service	3/4" Conduit
Cabinet drain	Gravity	1/2" FNPT polypro

Reliability

- > 2,500 hrs MTBF
- > 1,250 hrs MTBA
- < 3 hrs MTTR
- > 99.5% availability

Performance

Blend & Distribution:

Flow rate: 2.5 GPM @ 20 psi
(DI water @ Exit of CDU)

Accurate/Repeatable Blend:

pH ±0.1 accuracy
Density ±.005 accuracy

Blending Performance:

SG .003 standard deviation
pH ±.02 standard deviation

Controls

- Allen-Bradley SLC 500 series PLC
- Allen-Bradley Panelview 550 operator interface
 - System P&ID status
 - Alarm and warning screens (active and historical)
 - Distribution valve box status
 - Pump (and filter) runtime screens
 - Password protected blend and flush recipe modification
 - Password protected calibration screens
 - Password protected maintenance screens
 - Manual activation of valves/pumps from maintenance screens
- Connectivity to system PLCs & MegaView™ Supervisory via DH+ or ethernet network
- Local and remote EMO capability

Components

- Teflon pumps with pulsation dampening
- Polypropylene blend/mix and distribution tank
- Non-intrusive drum empty and level sensors
- Analytical sensor package
 - Inline full flow pH meter
 - Inline full flow densitometer/temperature monitors
 - Flowmeters



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