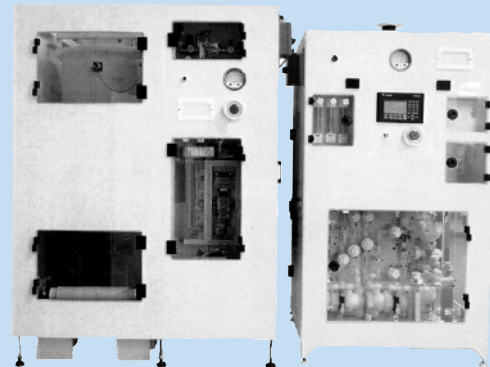


# MegaFlow™ IIIC

## Precision Blending and Distribution System

- » Modular scalable design
- » Flexibility for remote locations
- » Flow meter blending
- » 1 GPM make-up rate
- » Standard analytical sensor 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

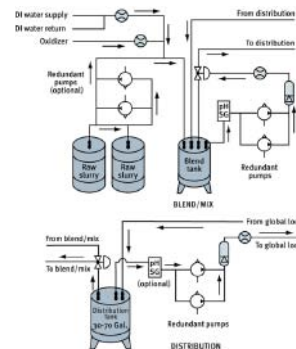
The MegaFlow IIIC is the ideal complement for medium and large polisher lines. The MegaFlow IIIC provides slurry blending with user-selected recipes to blend slurry, DI water and up to two chemical additives. The IIIC incorporates a separate distribution module that is fed by the blend/mix unit to provide a continuous supply of blended slurry. As the beneficiary of advanced R&D testing, the IIIC is developed to handle the most difficult slurries.

#### Blend/Mix/Distribution station

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

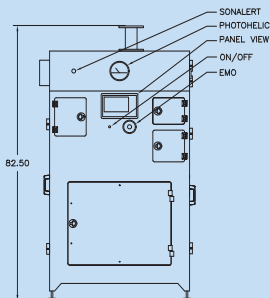
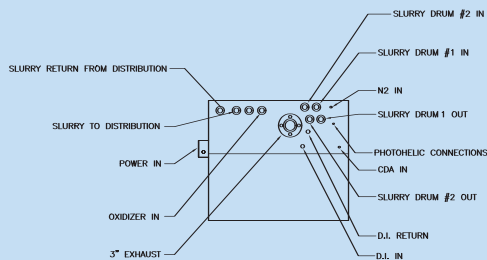
#### Distribution Station

- Primary and redundant Teflon pumps with auto-changeover
- Humidified nitrogen blanket to minimize slurry drying in distribution tank
- Flow sensors, sample port, and recirculating DI spray gun
- Enclosed 70 gallon distribution tank
- Global stabilization of distribution tank circuit



#### 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, blend tank and distribution tank mixers
- PFA lined blend/distribution tank
- Drum cabinets
- Slurry metrology slipstreams
- 200 gallon distribution slipstreams
- Automatic back pressure regulation of global loop
- Bar code reader for drum qualification



Model	MF IIIC	MF IIIC HC
Make-up rate	1 GPM	1 GPM
Accuracy	99.5%	99.5%
Distribution Tank	30 or 70 Gallons	70 Gallons
Cabinet Materials	Polypropylene	Polypropylene
# of chemicals	1 Standard, 2 optional	1 Standard, 2 optional
Dispense rate	2.5 GPM @ 25 psi	6 GPM @ 20 psi
Footprint-Blend/Mix	42" x 36" x 82"	42" x 36" x 82"
Footprint-Distribution	48" x 54" x 88"	48" x 60" x 85"

Facility requirements	MF IIIC	MF IIIC HC	Connection Type
DI water	5 GPM @ 40 psi	5 GPM @ 25 psi	3/4" Teflon™ Flaretek
N <sub>2</sub>	2 SCFM, 90 psi	2 SCFM, 90 psi	3/8" SS Swagelok
CDA	10 SCFM, 80 psi	10 SCFM, 80 psi	1/2" SS Swagelok
Exhaust	85-95 SCFM (blend) 65-75 SCFM (dist.) 2" H <sub>2</sub> O	110-120 SCFM 2" H <sub>2</sub> O	3" Pipe flange (blend) 6" Pipe flange (dist.) 6" Pipe flange (HC)
Process drain	30 psi, 5 GPM	30 psi, 5 GPM	3/4" FNPT polypro 1" FNPT polypro (HC)
Power	120 VAC, 15 AMP service	120 VAC, 15 AMP service	3/4" Conduit
Cabinet drain	Gravity	Gravity	3/4" FNPT polypro 1" FNPT polypro (HC)

### 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 (Regular Flow)

6 GPM @ 20 psi HC (High Capacity)

(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 screens
  - 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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