

MegaPure™ 4200SF

Chemical Distribution System

- » Exceptional submicron particle performance
- » Pressure vessel dispense
- » Stabilized filtration of day tank
- » Recirculation filtration of supply drum
- » Flow rate: 2.5 GPM @ 25 psi
- » SEMI S2-93 reviewed



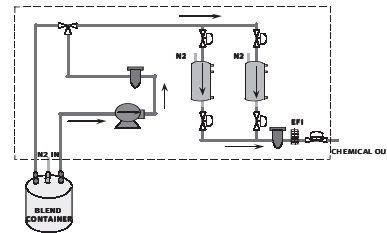
System Features

The MegaPure™ 4200SF Chemical Dispense Station is designed for ultra high-purity (UHP) chemical dispense for sub 0.18 μ line-width applications. The 4200SF provides drum recirculation filtration for transferring filtered chemical into the system day tank, minimizing filtration time to achieve particle guarantees. The 4200SF provides day tank Stabilized filtration, utilizing pressure vessel dispense to minimize filter hydraulic shock. Pump & filter run-time screens allow for streamlined scheduling of preventative maintenance to enhance uptime. Optional redundant distribution pumps for on-line pump maintenance ensure maximum system availability.

- Excess flow indication and shutdown
- Separate drum and day tank filtration circuits
- Drum and day tank sample ports
- Pulsation dampening of pumps
- Leak detection and alarm
- Non-intrusive drum empty detection
- Cabinet door interlocks
- DI/N2 pump and filter purging
- Recirculating DI spray guns

Options

- Dual drum with auto-changeover
- High capacity (HC) - 6 GPM
- Fab-wide recirculation
- Aspirated drains
- Drum & day tank cabinet
- FRPP cabinet (UL 94-0 and FM-4910)
- CE Mark 220 V, 50 Hz



Reliability

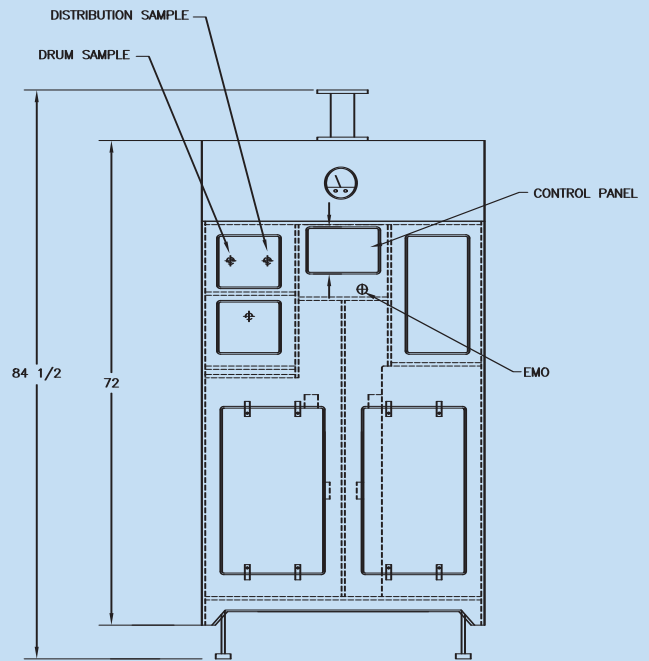
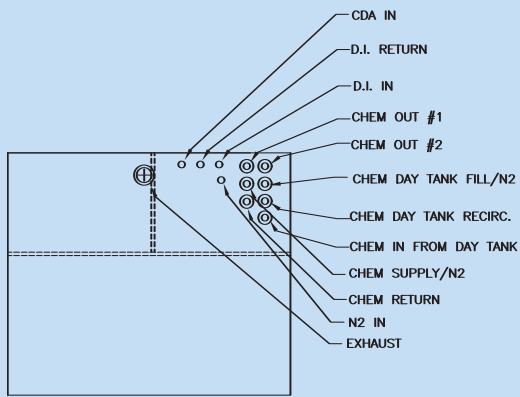
- > 4,000 hrs MTBF
- > 2,500 hrs MTBA
- < 2 hrs MTTR
- > 99.5% availability

Performance

Flow rate:
Regular Flow: 2.5 GPM @ 25 psi
High Capacity: 6 GPM @ 20 psi
(DI water @ Exit of CDU outlet)

Particle Count:

<10 particles @ 0.2 μ (chemical specific guarantees available upon request)
<1ppb total metal extractables for 35 standard metal ions



Utilities for testing

- DI water (18meg ohm)
- Semiconductor grade nitrogen (99.999%)
- Clean dry air

Controls

- Allen-Bradley SLC 500 series PLC
- Allen-Bradley Panelview 550 GUI
 - System P&ID/status
 - Alarm and warning screens
 - Distribution valve box status
 - Pump and filter runtime screens
 - Password protected maintenance screens
 - Manual activation of valves/pumps
- Connectivity to system PLCs & MegaView™ Supervisory via DH+ network
- Local and remote EMO capability

Components

- Teflon pumps with pulsation dampener
- Non-intrusive level sensors
- Photoelectric leak detectors
- Cartridge and encapsulated filters
- PFA pressure vessels
- PFA/PTFE wetted flowpath

Facility requirements	MegaTrend ARS	Connection Type
DI supply & return	5 GPM @ 40 psi	1/2" Teflon™ Flaretek
N2	3 SCFM, 90 psi	1/2" SS Swagelok
CDA	12 SCFM, 80 psi	1/2" SS Swagelok
Exhaust	200 SCFM, 2" H ₂ O	3" Pipe flange
Process drain	30 psi, 5 GPM	1/2" Teflon™ Flaretek 1" Teflon™ Flaretek
Power	120 VAC, 15 AMP, 50-60 Hz	3/4" Conduit
Cabinet drain	Gravity	1/2" FNPT polypro

Model	MP 4200SF	MP 4200SF HC
Application	Acids, bases, oxidizers	Acids, bases, oxidizers
Flowpath	3/4"	1"
Dispense rate	2.5 GPM @ 25 psi	6 GPM @ 20 psi
Cabinet Materials	Polypropylene	Polypropylene
MTBF	>2500 hours	>4000 hours
MTTA	>2500 hours	>2500 hours
MTTR	<2 hours	<2 hours
Uptime	99.5%	99.5%
Footprint	32" x 42" x 72"	36" x 42" x 72"
Filter Housing (drum)	10" Cartridge filter	10" Cartridge filter
Filter Housing (dist.)	10" Encapsulated filter	10" Encapsulated filter
Day tank configuration	Customer specific	Customer specific
Fire suppression	No	No
Cabinet leak detection	Yes	Yes



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