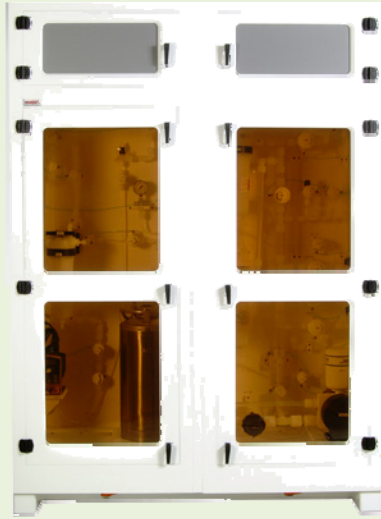


### CMU-5000: Automatic Developer Dilution System



The automatic Developer Dilution System (DDS), CMU-5000 is designed to dilute TMAH 25% and DI Water to appropriate concentration developer that can be used in semiconductor manufacturing processes.

MABAT offer the CMU-5000 based on batches. Each batch tested with two conductivity analyzers. The two measurements should be in spec of: 2.380 +/- 0.001 or better.

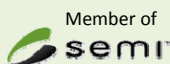
The system includes auto titration analyzer which offers the option to test each bath before transfer to buffer tank. The system is fully automatic and control by local HMI.

The control systems provide report of each batch and have the capacity to collect data for several years.

#### Standards

MABAT work to ISO 14001 and ISO 9001 standards, and is a member of SEMI.

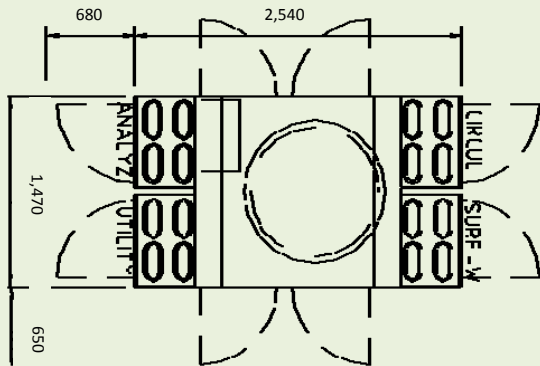
All products are manufactured according to SEMI guidelines and are CE marked.



- Batch size and volume are determine by process needs
- Internal monitoring of concentration correlation
- The equipment's accuracy of  $\pm 0.0001$  allows receiving punctuality of  $\pm 0.003\%$
- Small footprint
- 3 sides maintenance access
- Utilities located at high level for easy connection
- Can supply multiple POCs on demand
- Flow control to reach required mixture
- Polypropylene cabinets with height adjusting feet mounted on a stainless steel chassis
- High Level resolution touch screen for local operation
- All chemical handling pathways, tubing and valves utilise PFA
- Pneumatic actuation of valves, transfer and delivery chemical pumps
- Cabinet base acts as leak containment and any spills are automatically pumped to drain

#### DDS, batch system's advantages

- Adding's are done on a measuring base, in case of damaged batch, the system will drain the all batch to assure only process' approved chemical will reach the production line
- Mixing the batch is done by mixer and circulation pumps to reach chemistry's homogenous
- Concentration measurement is done by recalculated sample loop. Results are compared between the two independent conductivity sensors
- The system's measuring capability is based on an accurate weighing unit of up to several grams detection; this fact provides an additional control on the final received product
- The measuring accuracy is not affected by the batch's volume, and is not limited to any minimal or maximal amount of batch
- Provides the option to use totes from stock, to refresh the stock and to use in case of system fail



MABAT can offer a turn-key solution if required and have their own experienced team or approved local contractors to ensure project installation and acceptance dead-lines are achieved.

MABAT have a range of products to suit most applications and can also provide custom built systems for non-standard requirements. Site visits can be arranged to ensure the end user's exact needs are understood and catered for.

Please contact our offices to obtain advice and quotations.

For applications outside any system's specification or capabilities please refer to our local representative or the MABAT Headquarters at Kiryat Gat.

MABAT have more than 25 years experience supplying systems to the Semiconductor and Solar Cell manufacturing industries.

### Contact details

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## CMU-5000: Automatic Developer Dilution System

### Options

- CDU cabinet for TMAH filling
- Cabinet MOC Stainless steel frame, coated FM compliant plastics
- Delivery / Batch tank Consult our factory for sizes
- Sample chamber for on line sampling
- Filter housing according to process requirements

### Dimensions

	Height	Width	Depth
Process cabinet	2,080 mm	2,540 mm	1,470 mm

### Utilities Needed

DI	up to 20 l/min
N <sub>2</sub>	0.5-0.7 MPa up to 120 NI/min
Oil Free Air	0.5-0.7 MPa up to 400 NI/min
Drain	up to 20 l/min
Scrubber	up to 250 m <sup>3</sup> /h
Electrical includes UPS	230 VAC, 10-16 Amp
PLC	
Touch Screen	

### System Delivery Volume

Output	Up to 15 lpm as required by the application
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### Reliability

Uptime	>99.9%
MTBF	2500 hours
MTBA	250 hours
MTTR	2 hours, subject to spares being available on site