MEI
Wet Processing
Built on Commitment

Revolution
Semi-Auto Multi-Step Wet Processing

Small Footprint, Multi-Step Processing

MEI's Revolution multi-step wet processing systems combine ease of process control with a rotary robot design and precision engineering to create powerful, flexible tools with minimal fab footprints.

Rotary Robot for Minimal Fab Footprint

- 2–5 position, 2-axis design
- Multiple process tanks
- 150–300mm wafers
- Optional tank lids
- Pressure or optical tank level monitoring
- Quick dump rinse options

Versatile

- Multiple etch, strip and clean applications
- Easy recipe configuration
- Chemical spiking, dosing and fill options
- Acid and solvent models
- 2–5 process tanks
- Integrated Marangoni dryer

Performance and Yield with IDX Flexware

- Flexible
- Configurable
- Precise
- SECS/GEM compliant
- Touch-screen interface
- Simultaneous multiple lots and recipes

Designed for: Productivity ■ Safety ■ Reliability ■ Configurability ■ Low Cost ■ Maintenance Friendly

Applications

Fluid Jet™ Metal Lift-Off

Si Etch Silicon Etch

Tru Etch Metal Etch

- FEOL Resist Strip
- RCA Clean
- BEOL Resist Strip
- InGaP-GaAs Etch
- Post CMP Clean
- Prediffusion Clean
- Oxide Etch
- SWP Clean
- Developer
- Nitride Etch

www.meillc.com ■ 1-541-917-3626

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Process Tanks and QDR

Features for Optimum Performance

- 2–5 tanks
- Megasonic or ultrasonic bath
- Heater (including solid state), chiller and dryer options
- Chemical spiking, in-tank blending, filtration concentration monitoring, bulk fill, agitation, DI flush and drain options
- PVDF, stainless, quartz, halar or natural poly
- Optional tank lids
- Pressure or optical tank level monitoring
- QDR tank with sparger bar spraying method, shared facilities, robust dump cylinder

Integrated Dryer Option

- Technology node 200nm
  - Best particle performance on hydrophilic surfaces
- Compatible with processing Teflon cassettes
- Slow drain Marangoni process
- Static wafer lifter to minimize water contact marks
- Dry cycle time 15–20 min
- 10–20 ml IPA per cycle

System Options

Custom Designed for Your Process

- 100–300mm wafer Sizes
- Input/output queues or manual loading
- Acid/base or solvent: Choice of FM4910 (Halar, CPVC, PVDF), polypropylene or stainless steel
- Chemical spiking, recirculation, and filtration
- Manual pour chemistry via deck mounted cup or chemical spiking reservoir
- End effector materials PVDF/ PTFE, halar, quartz or stainless
- Fire suppression (available upon request)

Additional Options

- Heater/chiller/in-line/ blanket/external
- Queue info
- Custom end effector dual sizes
- Integrated Marangoni dryer

Genesis
MARANGONI DRYER
by MEI

Genesis Marangoni Dryer

Two to Five Tank Capacity

IDX
Flexware
PROCESS CONTROL SOFTWARE
by MEI

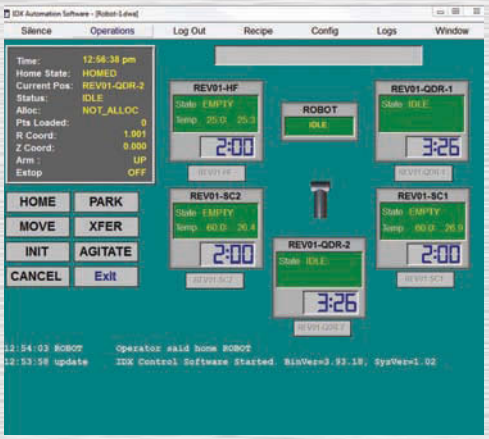
Superior Process Control

- SECS/GEM compliant
- Recipe editor
- Advanced process controls
- Unlimited user/permission levels
- Easy-to-use, touch-screen interface
- Error logging and data graphing
- Barcode reader compatibility
- Remote access compatible
- I/O monitor displays status

Analog Control

Analog sensing enables software to control:

- In-tank blending
- Blending ratio creation
- Control DI water inject
- Control temperature
- Recirculation flow
- Spiking volume



REVOLUTION: Semi-Auto Multi-Step

MEI Wet Processing
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IDX Flexware

Custom Designed

- MEI partnership design process
- MEI application solutions
- Custom tank, material and configuration
- Solid works modeling

Flow Modeling

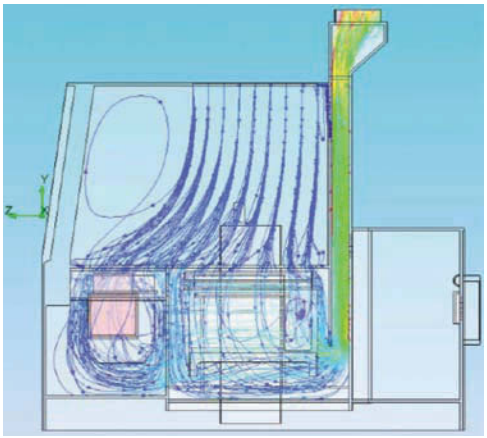
- Fume capture
- Minimal exhaust

Chemical Spiking, Dosing and Bulk Fill Options

- Bulk fill via system request
- In-tank mixing
- Concentration monitors and controls
- Metering pump reservoir dispense
- Spiking flow rate monitoring

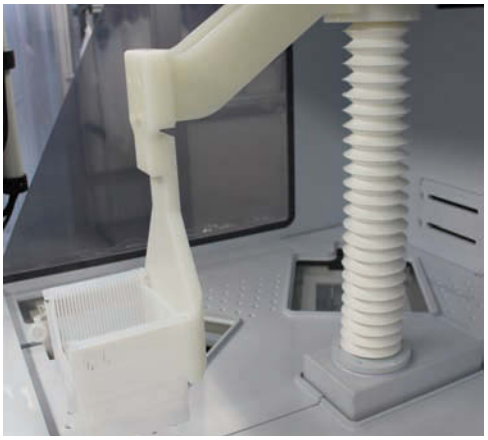
Rotary Robot

- Robust, versatile, serviceable
- 2–5 position
- 2-axis design
- 4 sec transfer speed
- Product size driven custom end effector
- Variable speed agitation
- "Off the shelf components"
- Field proven



ULPA Filtered Flow Model

Integrated Manual Pour Reservoirs



Rotary Robot with Bellows Seal

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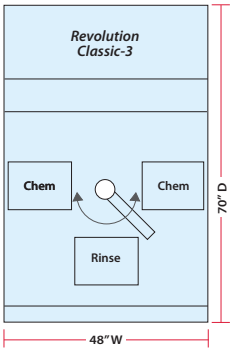
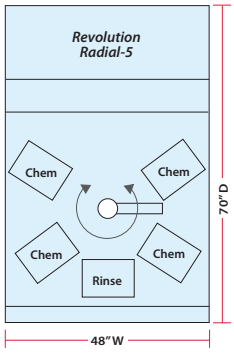
REVOLUTION: Semi-Auto Multi-Step

Typical Configurations (Other configurations available)

	Classic-3	Radial-5
Layout/Footprint		
Max Static Tank Size	Dual 200mm	Single 200mm/ Dual 150mm
Max Recirculated Tank Size	Single 200mm/ Dual 150mm	Single 150mm
Concurrent Lots Processed	1	1
Exhaust	Top or Bottom	Bottom
Available Tank Lids	Yes	No
Available Mega/Ultra Sonics	Yes	Yes
Maintenance Access	Back	Back
Available Chemical Fill Type	Manual, Fill-cup, Bulk	Manual, Fill-cup, Bulk
Available Spiking	Yes	Yes

General Specifications

Shell style: Single shell fully integrated design.
Shell material: Choice of FM4910 (Halar, CPVC, PVDF), polypropylene or stainless steel.
Agitation: Standard
Filter Recirculation: Standard
Facilities: Bottom-back mounted plenum drains, top or back exhaust connections available, low exhaust requirements; shared facilities and electronics. UL compliant electrical components.

Typical Facility Table (Will change to specifications)

Description	Connection	Requirement
N2 Supply	3/8" Swagelok	40–60 PSI @ 5–7 SCFM
CDA Supply	1/2" Swagelok	60–80 PSI @ 15–30 SCFM
Cold DI Water Input	1" Flaretek	45–60 PSI 10–20 GPM
Front Plenum Rinse Drain	2" Male Pipe	N/A
Back Plenum Drain	3/4" Flaretek/2" Male Pipe	N/A
Process Tank Drain	3/4" Flaretek	N/A
Cold DI Return	1/2" Flaretek	N/A
Process Exhaust	10" Duct	250–650 CFM @ 1" Static *Minimum*
Plumbing Compartment Exhaust	4" Duct	100–200 CFM @ 1" Static *Minimum*
Hot DI Input (Module 1 only)	1" Flaretek	Connect to Water Heater
Chem Bulkfill	3/4" Flaretek	N/A
Electrical Input	5-Wire	208V 45A–100A FLA
Ozone Injection	1/4" Swagelok	N/A
CO2 Connection	TBD	CO2 Bottles Per Fire System Spec

Designed for Reliability

- Limited PM requirements
- Field proven reliability
- Semi-S2 compliance
- Durable "off the shelf" components
- Nitogen purged electrical compartments
- Designed to provide MTBF >1,500 hours – E1092

Low Cost of Ownership

- Extended tank life
- Improved process control
- Reduced DI water useage
- Reduced chemistry usage
- Easy installation

Designed for Safety

- Semi-S2 third party inspection optional
- FM4910 material standard
- S8 compliant
- UL/NFPA79/NEC
- CE optional

MEI's Award Winning Service and Support

MEI Global Field Service Team

- Final test and verification
- Standard one year parts and labor warranty
- Two year optional warranty
- Full field service support, on-site warranty coverage
- On-site training provided