



Advancer (& Advancer Gemini)

Semi-Automated Single-Step Wet Processing Systems



Advancer: Automated, Single-Step, Modular

At MEI our reputation is built upon our commitment to outstanding customer service.

Precise Control, High Reliability

MEI Advancer Series wet processing systems are highly configurable, semi-automated modular, front-back, side mount robotic wet stations. Applications include processing for solar cells, IC devices, medical devices, MEMS manufacturing and parts cleaning. Advancer wet process stations are bulk chemical ready and incorporate chemical spiking and programmable “in-tank” blending of chemistries in process tank and include quick dump rinse tanks. Configurability, up-time, yield, maintainability, and throughput are the hallmarks of MEI wet processing systems.

- **Tailored.** Systems to fit your process and fab design.
 - Minimal footprint, with up to four modules, using one robot per module
 - Using MEI IDX Automation Software and single point control across multiple modules
 - Wide variety of clean, etch and strip applications
 - Gemini option doubles capacity with shared facilities, electronics and PC controller
- **Production Ready.** Quality, ergonomics and safety are designed and built right in.
 - Easy to use and well controlled with MEI’s IDX Automation Software (SECS/GEM compliant)
- **Precise.** MEI’s Advanced Process controls provide closed loop monitoring/control using software recording.
- **Designed for Safety and Maintainability.**
 - Conforms to SEMI-S2 standard

MEI’s Line of Wet Processing Systems

- **Evolution**
In-line, fully-automated, high throughput, wet processing systems
- **Revolution**
Rotary, automated, multiple-step, modular, wet processing systems
- **Advancer (and Advancer Gemini)**
Semi-automated, single-step, modular, wet processing systems
- **Achiever**
Manual wet benches, fume hoods and parts cleaning benches

MEI Products & Services

- Wet Process Systems
- Chemical Delivery & Handling Systems
- IDX Control Automation Software
- Used Semiconductor Systems Reconditioning
- Cleanroom Safety & Ergonomic Equipment
- Field Repair & Service

ADVANCER: Automated Single-Step Wet Processing System

Tailored Design & Custom Built

- Partnership Design Process—built to your process requirements from a wide array of options
- Modular system links up to four modules using one robot per module with single point control
- Etch, strip and clean systems from 6–8 inch wafers, single or dual cassette
- Smallest possible footprint for two tank designs
- SECS/GEM interface options
- Controlled by MEI's IDX Automation Software with touchscreen interface, configurable, SECS/GEM compliant (see IDX datasheet)
- Multiple tank options (PVDF, stainless steel, quartz, Halar or natural polypropylene)
- Heater, chiller and dryer options, including solid state
- Chemical spiking, in-tank blending, filtration, concentration monitoring, bulk fill, agitation, DI flush and drain options

Maintenance Friendly

- Thoughtful design includes easy access to all major component areas and uses OEM, off-the-shelf components
- MEI robots are designed and built in house for reliability, ease of maintenance and service
- Easy access plumbing, pneumatics and electrical compartments (front or rear)
- Pumps, drains and fills are accessible and controllable from main screen
- Ability to manually control robot and on/off of individual valves
- Separate exhaust connection for plumbing compartment, prohibiting fumes from leaking to or from process area

Production Ready

- Advanced process controls; concentration, exhaust, DI water injection, and flow rate monitoring
- Small footprint, high throughput and low cost of ownership
- Quality, ergonomics and safety built in
- Unlimited production recipes with easy editing
- SEMI-S2 and FM certified systems
- UL compliant electrical components
- Pass-through channels allow efficient routing of electrical and pneumatic lines, segregated from process fumes
- Interlocks with EPO buttons and exhaust pressure sensors
- Fully tested before shipping with DI water and to customer requirements
- Installation and start up included

Reliability

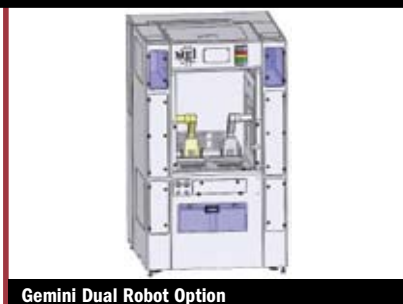
- Reliable, field-proven robotics and controls
- Nitrogen purged electrical compartments
- Designed to provide MTBF > 1,500 hours - E1092
- Uptime > 95 percent
- Maintenance friendly
- Durable OEM components

World-Class Service & Support

- Standard one-year parts and labor warranty
- Two-year optional warranty
- Full field service support and on-site warranty coverage
- Upgradable modular design



EPO & Robot Stop Buttons

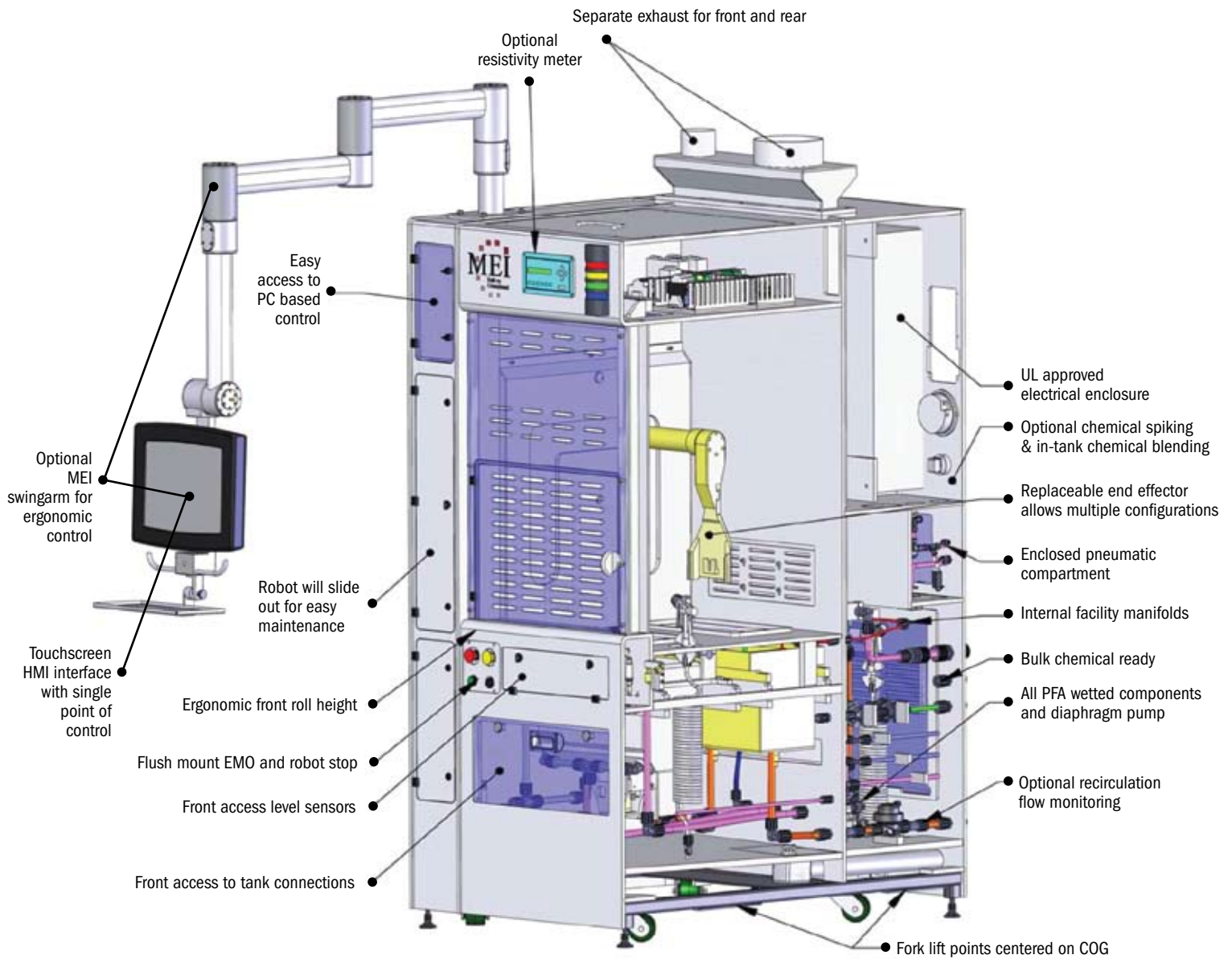


Gemini Dual Robot Option



Easy Access Plumbing Compartment

ADVANCER: Automated Single-Step Wet Processing System



877-858-3270





MEI, LLC
 3838 Western Way NE
 Albany, OR 97321
[www.meillc.com/
 wet_processing_systems.asp](http://www.meillc.com/wet_processing_systems.asp)

Phone 541-917-3626
 Toll free 877-858-3270
 Fax 541-917-3623
 Sales 541-704-2424
 Sales Fax 541-917-0174

Advancer Specifications

General

System type:	Advancer Wet Process System—one to four modules.
Shell style:	Single shell fully integrated design.
Exhaust:	All configurations airflow modeled for lowest exhaust with complete fume capture.
Access doors:	Clear PVC, hinged with tool-required access, plumbing/wet area doors lift-out style to prevent leakage.
Transfer robot:	MEI-made 2-axis, front/back, mounted on the side of the process area, smooth multi-axis moves with programmable agitation.
Control system:	MEI IDX Automation Software running on a standard PC host with Windows XP providing easy-to-use, flexible and configurable controls.
Safety interlocks:	Front/rear EMO buttons, process and plumbing cabinet plenum float switches, exhaust photohelic, electrical compartment N2 purge, tank liquid level heater interlocks, door position sensor interlock on operator access to load areas.
Electrical protection:	Main power disconnect with individual branch circuit protection devices.
Status notification:	Audible/visual alarm.
DIW manifold:	One-piece purebond loop style, Teflon, minimal dead-legs.
Documentation:	Operation manual (hard copy and CD ROM versions with hypertext links), all OEM equipment cut-sheets, electrical and plumbing schematics (hard copy and CD ROM versions).
Process enclosure:	Simplified design ready to assemble and install in shortest time possible.

Options

Process cassette:	Customer specified, up to dual 8-inch.
Load method:	Manual load to robot end effector.
Fire suppression:	Available upon request.
Shell material:	Choice of FM4910 (Halar, CPVC, PVDF), polypropylene or stainless steel.
Bath options:	Custom tank and process bath options include megasonic or ultrasonic bath, chemical spiking, recirculation, and filtration. Heater (including solid state) and chiller options are also available.
End effector:	Manufactured from a variety of materials including PVDF/PTFE, Halar, quartz and others.
Gemini option:	Dual process tanks per module, with shared facilities and electronics, provides high capacity in a small space for a low cost.

Facility Requirements

Facilities:	Bottom-rear mounted plenum drains, top or rear 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" Flaretek	45-60 PSI @ 5-7 ACFM
CDA supply	1/2" Flaretek	60-80 PSI @ 50 SCFM
DI water input	1" Flaretek	45-60 PSI 10 GPM
Chem bulkfill	1/2" Flaretek dual containment	N/A
Acid waste	2" male pipe	N/A
Front plenum drain	2" male pipe	N/A
Rear plenum drain	2" male pipe	N/A
Chilled water input	1/2" Flaretek	2 GPM 40-60 PSI (requires flow meter)
Chilled water output	1/2" Flaretek	N/A
DI water return	1/2" Flaretek	N/A
Plumbing cabinet exhaust	4" duct	150 CFM @ 1" static
Main exhaust	10" duct	450 CFM @ 1" static
Electrical supply	5-wire 1 AWG	208V 3P 100 FLA

All facility requirements are per module except electrical.