

n.chemixx-series



SEMI & AUTOMATIC SINGLE WAFER
WET PROCESSING SYSTEMS

PHOTOMASKS OR WAFERS WET PROCESSING EQUIPMENT CLEANING/ETCHING OR METAL LIFT-OFF

AUTOMATED OR SEMI-AUTOMATED SYSTEMS WITH ONE OR MULTI PROCESS CHAMBERS

- Application: wet cleaning, etching, drying and metal lift-off
- Wafer sizes up to Ø 300 mm and
- Square substrates and mask up to 230 mm x 230 mm (9" x 9")
- 10"/22" color touch screen for easy operation
- Up to two electric media arms per chamber
- Different types of nozzles, puddle, spray (cone or flat)
- Heated media lines: 20-80°C *depending on media
- DI-water bowl rinse
- Vacuum end effector with/without flip function
- Inline or centralized substrate handling with a dual-arm robot
- Pre-Alignment or AOF
- I/O-station open cassette or FOUP loadport
- Vacuum or low contact centrifugal force chucks
- Programmable media flows
- External media cabinet for different chemicals

SYSTEM DESIGN

- System frame made of powder-coated stainless steel or made of PP white
- Transparent doors for process area, lockable
- Emergency stop button for safety
- Signal tower with light sections for visualization of the system status
- Adjustable leveling feet and transport wheels
- General design to meet ISO class 4

FLEXIBLE, PRECISE, AND SCALABLE WET
PROCESSING SYSTEMS DESIGNED FOR BOTH
RESEARCH LABORATORIES AND INDUSTRIAL
MANUFACTURING ENVIRONMENTS

SEMI-AUTOMATIC R&D SYSTEMS TO FULLY AUTOMATED CASSETTE-TO- CASSETTE PLATFORMS FOR HIGH-VOLUME PRODUCTION



CONTROL UNIT

EQUIPPED WITH OUR IN-HOUSE CLS (CLUSTER SOFTWARE) FOR SUPERIOR PROCESS CONTROL.

- User-friendly operator interface GUI with 10" or 22" touch screen monitor
- Programmable process parameters:
dispense arm motion, media flow, spin speed and N2 blow
- Recipe editor to write, edit and manage user recipes
- Recipe storage function on flash drive or memory stick
- Log file and error tracking history
- Automatic engineering process and servicemode
- User management with different password levels

Optional: SCES/GEM integration or to any other software management.



CLEAN & ETCH MODULE

FOR CLEANING, ECHTING AND DRYING

- Up to two electric media arms for chemical- or mechanical processing
- Dispense arm for max. 4 media lines/nozzles
- DI-water bowl rinse
- Wafer / substrate alignment
- Different types of nozzles
- BSR nozzle (adjustable in position and angle)
- Vacuum- or low contact centrifugal force chucks
- Chucks for double side brush cleaning (post CMP)
- Media supply by pressure canister or pump systems
- Media mix system
- Filter system for solvents



NOZZLE TYPES

CHEMICAL PROCESSING

- Puddle nozzles
- Spray nozzles (cone, flat)
- 6-hole puddle nozzle
- Atomizer nozzles
- Nitrogen (N2) blow
- BSR (back side rinse) nozzle

MECHANICAL PROCESSING

- Brush system
- High pressure
- Megasonic nozzle



CLEANING & ETCHING SYSTEM FOR

- Post CMP cleaning
- RCA cleaning
- Front-, back side, edge bevel cleaning
- TSV cleaning
- Wafer thinning
- FEOL etching
- BEOL etching and cleaning
- Metal etching

METAL LIFT-OFF MODULE

SUITABLE FOR ALL TYPES OF METAL LAYERS, ALLOYS, AND OTHER PROTECTIVE COATINGS

- Cost-efficient process: Recovery of process chemicals and precious metals
- Different nozzle types available:
 1. High pressure nozzle
 2. Megasonic nozzle
 3. Puddle nozzle
 4. BSR nozzle
 5. Nitrogen blow with filter
- Stainless steel process chamber (bowl, dispense arm)
- Centrifugal, vacuum or standard chucks
- High pressure pumps for DMSO, Acetone, IPA, DI-water, Methanol
- Programmable process parameters
- UV flame detector
- DI-water gun (outside)



I/O STATIONS & SUBSTRATE HANDLING

1. FOUP-loadports with mapper
2. Open cassette stations
3. SMIF-loadports
4. Wafer alignment (AOF)



GENTLE WAFER FLIP MODULE 180°

On the Wafer End effector or on a separate flip module.

OPTIONS

1. Customized chuck & inlay design
2. Temperature controlled dispense line
3. External media cabinets for supply or waste tanks
4. FFU/HEPA filter





REFILL STORAGE CABINET FOR HAZARDOUS CHEMICALS

- Eliminates the need for manual filling with hazardous chemicals
- 1 media cabinet unit includes 2 process tanks and refill chambers
- Pump directly from unit to process tool
- Storage tank with level sensors (low, full, high-high)
- Refill system with safety drip pan for dip tube
- DI-Water gun for chamber flushing
- Hard wired exhaust connection with alarm function
- Leakage sensor in the safety drip pan
- 2x10 liter (PVDF or PE) storage day tank per unit (tank and tubing material compatible to each chemical used)



MEDIA STORAGE CABINETS

VARIOUS MEDIA CABINETS & TANK DESIGNS

- For manual filling or via bulk-systems
- Media cabinet includes up to 4x 10 liter chemical tanks
- Electrical cabinet mounted on the top
- Media can be heated or temperature stabilized (TCU)
- Media tanks with rotary pumps for media supply
- Tank Materials: SS, PP, HDPE, PVDF, ECTFE
- Tank sizes: 10, 20, 40 liter

TECHNICAL DATA

GENERAL

Substrate size:	Up to Ø300mm or 230 mm x 230 mm (9" x 9")
Motor spin speed:	Max. 10.000 rpm, programmable in 1 rpm steps*
Step time:	1 up to 999.9 sec, in 0.1 sec steps
System frame:	Made of powder-coated stainless steel or made of PP white (optional FM 4910), adjustable feet & transport wheels
Process chamber:	Made of PP-white (optional FM4910)
Process bowl:	Made of PP-natural

**depending on chuck design, substrate weight and load*

REQUIREMENTS

Power:	400 VAC / 3 Phase / N / PE / 50 Hz
CDA:	8 bar ± 2 bar
Vacuum:	-0.8 bar
Nitrogen:	4.5 ± 0.5 bar
DI-Water:	Min. 2.0bar, max. 3.0bar
Exhaust process area:	60-180m ³ /h*
Drain:	To waste tank with high level sensors or to the facility drain* <i>*chemical and process related</i>



NOTION

S Y S T E M S



HEADQUARTER

Notion Systems GmbH
Werkstr. 2
68723 Schwetzingen
GERMANY

☎ +49 6202 57877-0
☎ +49 6202 57877-99

sales@notion-systems.com
www.notion-systems.com



SINGEN

Notion Systems GmbH
Josef-Schüttler-Str. 2
78224 Singen
GERMANY

☎ +49 7731 16995 0
sales@notion-systems.com

USA

Lab14 Inc.
400 TradeCenter, Suite 4850
Woburn, MA, 01801
USA

☎ +1 (857) 298-8204
info@lab14.group

SINGAPORE

Lab14 Singapore Pte Ltd.
#02-08 CleanTech One. 1
Cleantech loop, 637145
SINGAPORE

☎ +65 9170 5979
info@lab14.group

