

Automatic lift-off photolithography and resist cleaning system /
Maximus 804_Lift-Off Resist Strip

Specification

MAXIMUS 804 Automatic Lift- Off



1. Manufacturer – ATMsse GmbH (<http://www.atmvision.de/>)
2. Description - (according to Attachment №1 to Supply agreement №50100201002)
3. Ownership data – from 2010 year
4. Location - Germany

№	Title	QTY
1	<p>MAXIMUS 804 Microsystem Automatic Lift- Off and Cleaning System for Ø 2", 3" and 4" wafer Consists of:</p> <ul style="list-style-type: none"> • Cabinet MAXIMUS 804 <ul style="list-style-type: none"> - made of stainless steel - glass doors for process area - stainless steel doors for media / maintenance area • 3-axis robot, class 1 • End effector vacuum standard for Ø 2", 3" and 4" wafer • Flat touch screen monitor • Computer as controller and user interface • Cassette loading plates for wafer Ø 2", 3" and 4" cassette as I/O • Touch-less video pre-alignment for wafers up to Ø 8" • Light beacon • Remote control, for quick log file checking for service and maintenance purposes via modem, ISDN interface or USB stick • Software for easy programming of station recipes and flow recipes at the system or on a connected PC • CE marked system • An ENGLISH manual on standard paper and a CD-ROM 	1

General System Information

Pos.	Qty.	Item - Description
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LIFT- OFF BATH:

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|---|--|---|
| 1 | | Stainless steel tank for hot NMP (Housing inclusive N2 flush for inert atmosphere manually adjustable with flow meter) <ul style="list-style-type: none">- made of stainless steel- with overflow- integrated level sensors- integrated drain- with exhaust and N2 flush for inert atmosphere- recipe programmable exhaust control for bath exhaust |
| 1 | | Carrier agitation and lifting unit <ul style="list-style-type: none">- pneumatically driven lifter- carrier holder for 1 x 24 wafers 2" made of stainless steel and Teflon and after retrofit- carrier holder for 2 x 12 wafers 3" & 4" made of stainless steel and Teflon- AC-motor with frequency converter and eccentric tappet wheel |
| 1 | | Media recirculation unit <ul style="list-style-type: none">- filter housing made of stainless steel- 2 filter with 1 µm, 0.5 µm pore size- centrifugal pump for continuous recirculation |
| 1 | | Cryostat for heating and cooling <ul style="list-style-type: none">- up to 80°C±1°C media temperature- incl. Heat Exchanger Unit- complete with tubing and temperature control unit |

□ LIFT- OFF PROCESS CHAMBER:

- | | | |
|---|--|--|
| 1 | | Spinner module <ul style="list-style-type: none">- closed process chamber- process bowl (process bowl, splash ring and exhaust cover ring), made of stainless steel- integrated process bowl exhaust and drain- recipe programmable exhaust control for process bowl exhaust |
| 1 | | Electronic media arm <ul style="list-style-type: none">- brushless DC motor with encoder driven media arm made of stainless steel- recipe programmable in speed and position (dynamic and static dispense possible)- programmable speeds: 1 up to 400steps- programmable position in 0,1mm increments (circular arc)- z-axis recipe programmable in two positions |
| 1 | | Drain filter for Lift off processing <ul style="list-style-type: none">- made of stainless steel- mesh size of 800 µm- manually exchangeable |
| 1 | | Vacuum chuck for Ø 2" and 3" and 4" wafer <ul style="list-style-type: none">- with vacuum backside fixing- made of PEEK |

□ **NMP RECIRCULATION SYSTEM:**

- 1 Static puddle nozzle for NMP media (soak)**
 - recipe programmable puddle /full stream nozzle on the media arm
 - recipe programmable dispense time in 0,1sec steps
 - media flow manually adjustable via flow controller
 - includes flow controller, media valve, tubing and nozzle
 - static nozzle manually adjustable

- 1 Heated Media line for NMP puddle (soak)**
 - with tube in tube heating up to point of use
 - up to 80°C±1°C media temperature
 - incl. Heat Exchanger Unit
 - complete with tubing and temperature control unit
 - limited to 300ml/min

- 1 High pressure system NMP**
 - programmable high pressure nozzle for cleaning applications or lift-off process
 - pressures from approx. 10 bar up to 180 bar
 - including media valve, tubing, nozzle, high pressure unit, pressure reservoir

- 1 20ltr. recirculation tank for NMP**
 - made of stainless steel
 - with high and low-level sensor
 - with overflow
 - with drain valve
 - exhaust for venting pressure tank system or media cabinet necessary

- 1 Filter cascade**
 - filters made of stainless steel
 - 2 filter with 1 µm, 0.5 µm pore size
 - centrifugal pump

- 1 Chamber rinse system**
 - programmable chamber rinse system with NMP
 - including media valve, tubing and nozzles

□ **NMP FRESH MEDIA RINSE:**

- 1 Static puddle nozzle for fresh NMP media (rinse)**
 - recipe programmable puddle /full stream nozzle on the media arm
 - recipe programmable dispense time in 0,1sec steps
 - media flow manually adjustable via flow controller
 - includes flow controller, media valve, tubing and nozzle
 - static nozzle manually adjustable

- 1 10ltr. Pressure tank system for sump-tank levelling with fresh NMP (rinse)**
 - stainless steel tank with low-level sensor
 - complete with tubing and quick-connectors for easy tank refill / change
 - complete with pressure regulator and gauge to adjust tank/dispense pressure
 - to be stored behind the system
 - exhaust for venting pressure tank system or media cabinet necessary

□ **Cleaner Module (DI- water and IPA rinse):**

1 Closed Process module

- process chamber made of PP
- integrated process bowl exhaust and drain
- house drain connection
- recipe programmable exhaust control for process bowl exhaust

1 Electronic media arm

- brushless DC motor with encoder driven media arm made of stainless steel
- recipe programmable in speed and position (dynamic and static dispense possible)
- programmable speeds: 1 up to 400steps
- programmable position in 0,1mm increments (circular arc)
- z-axis recipe programmable in two positions

1 Low contact chuck for Ø 2" wafer

- made of PP or stainless steel

1 Low contact multi chuck for Ø 3" and 4" wafer

- made of PP or stainless steel

1 Puddle nozzle for solvent media (IPA)

- recipe programmable puddle /full stream nozzle on the media arm
- recipe programmable dispense time in 0.1sec steps
- media flow manually adjustable via flowmeter
- includes flowmeter, media valve, tubing and nozzle
- requires the space of 1 media line on the media arm

1 10 liter Pressure tank system for solvent media (IPA)

- stainless steel tank with low-level sensor
- complete with tubing and quick-connectors for easy tank refill / change
- complete with pressure regulator and gauge to adjust tank / dispense pressure
- to store behind the system or in separate media cabinet
- exhaust for venting pressure tank system or media cabinet necessary

1 Puddle nozzle DI water

- programmable puddle / full stream nozzle
- including media valve, tubing and nozzle fixed or on the arm
- static nozzle manually adjustable

1 Nitrogen (N₂) blow

- recipe programmable nitrogen blow nozzle on the media arm
- recipe programmable dispense time in 0.1sec steps
- media flow manually adjustable via flowmeter
- includes flowmeter, media valve, tubing and nozzle
- requires the space of 1 media line on the media arm

1 Static BSR nozzle for DI-water rinse

- recipe programmable BSR nozzle fixed in process bowl
- recipe programmable dispense time in 0,1sec steps
- media flow manually adjustable via flow controller
- including flow controller, media valve, tubing and nozzle

Pos. Qty. Item - Description

□ **MEDIA SEPERATION:**

1 Drain selection for 2 different waste media

- recipe programmable drain selection
- to separate 2 different waste media

1 5 liter waste tank

- instead of the standard house drain connection
- must be placed behind the system or separate media cabinet
- complete with tubing and high level sensor

□ **OTHER:**

1 Fire Suppression

- infrared flame detector, 200ms
- visual signal and acoustical signal with 102dB
- incl. electronic cabinet and 30kg CO₂ pressure bottle
- to be placed in the grey room area or beside the system

1 Programmable NMP pressure

- recipe programmable NMP pressure
- pressures from approx. 10 bar up to 180 bar
- inclusive electrical pressure regulator

Packing photos:

