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Subject to change without prior notice



DELTA 80, WeAI, 08/2002, #1

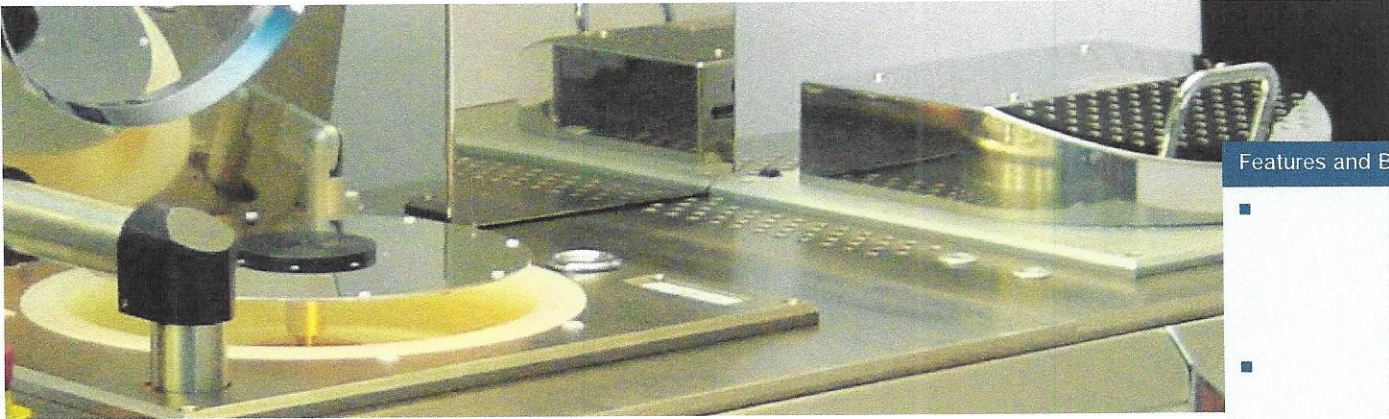
SPIN COATERS

DELTA **+80** GYRSET®

SÜSS + MicroTec

www.suss.com

SÜSS + M



Features and Benefits

DELTA 80 GYRSET®

Universal 8" Coating System / Advanced Spin Coating

The **DELTA 80** is the newest SUSS Spin Coater based on the well known SUSS patented GYRSET® closed cover coating technology. It combines state of the art technology with innovative excellence.

The **DELTA 80** can process delicate wafer fragments, wafers up to 8" (ø 200 mm) or substrates up to 6" x 6" (150 x 150 mm).

The unique design of the **DELTA 80** process chamber provides a better uniformity than conventional open bowl spin coaters. At the same time it can significantly reduce resist consumption up to 60% for resists like Cyclotene™ (BCB) compared to conventional Spin Coating systems. The Delta 80 is also the ideal tool for coatings over high topography

Better uniformity and less resist consumption make the SUSS **DELTA 80** Spin Coater the ideal tool regarding the cost of ownership.

The SUSS **DELTA 80** Spin Coater is simple to operate with fully programmable process parameters. The system is available as a bench mounted module (BM) or for stand alone (T version) operation integrated into an attractive stainless steel cabinet. A variety of options are available.



PATENTED SOLUTION

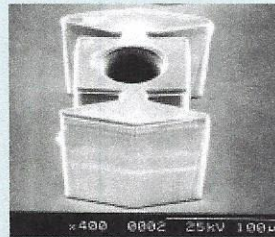
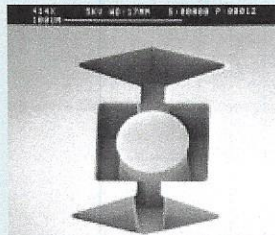
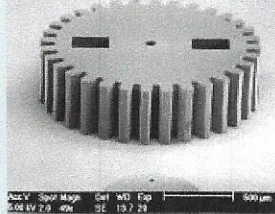
SUSS **DR 80**

Of Processing:

wafers and substrates
OG/adhesive promoters
technology
substrates
display (passive, active,
y)
relative photoresist
d convex lenses

isks (ROM, audio, video)
ring with thin layer coating
es, encoders, scales

lications for flip chip

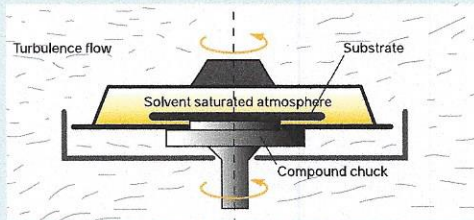


GYRSET® SYSTEM

SUSS GYRSET® system is based on revolutionary concept. Compared to a spin coating system it has multiple advantages. The GYRSET® system offers (y and up to 60% resist cost saving resist).

system with indexed bell-shaped air turbulence inside the process technique yields a uniform, consistent resist without the usual spinning defects (e.g., no splashback, no striations, no corner effects).

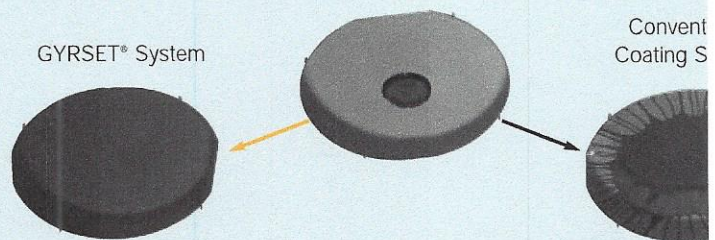
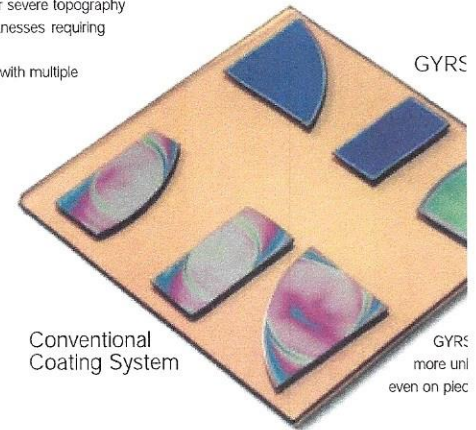
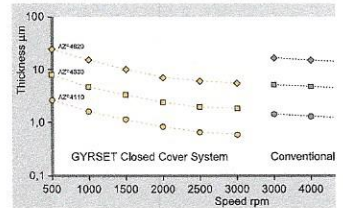
solvent-saturated atmosphere inside the chamber, less resist dry skin effect frequently, better uniformity and process results as well as for thin resist layers are

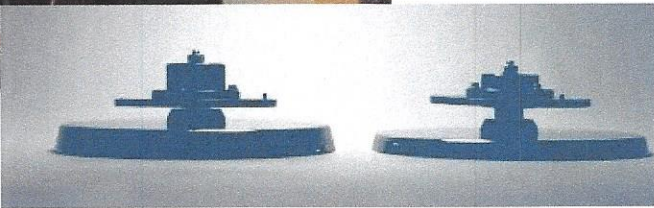
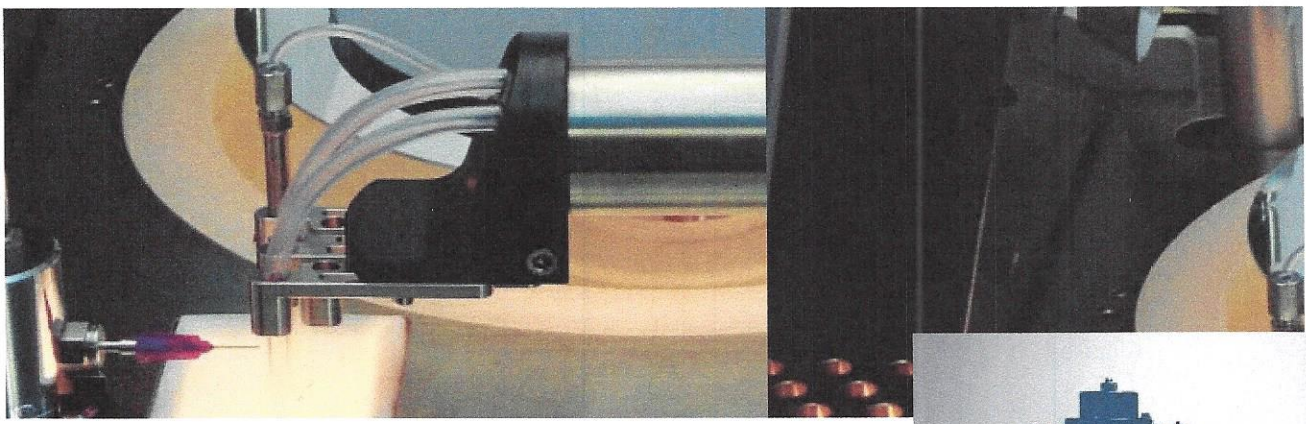


BENEFITS OF OWNERSHIP

SUSS **DR 80** GYRSET®
A Wise Investment

- Reliable, consistent and uniform material application at lower spin speeds
- Economic ownership costs including lower resist consumption and reduced waste disposal expenses
- Service that is a cornerstone of our products and our reputation in the industry
- Highly reproducible thick resist applications
- Uniform coverage even over severe topography
- A wider range of resist thicknesses requiring fewer resist types
- Warranty backed by SUSS with multiple world-wide locations
- Technology unsurpassed in the industry today

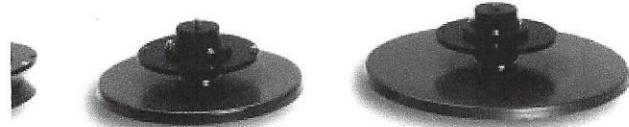




...E AND FLEXIBLE

GYRSET®
can be equipped with three different
s: 2" up to 8". The configuration is
ected and the maximum speed set
ith a change over time of less than 5
JSS **DELTA 80** GYRSET® is the most
gradeable coater on the market.

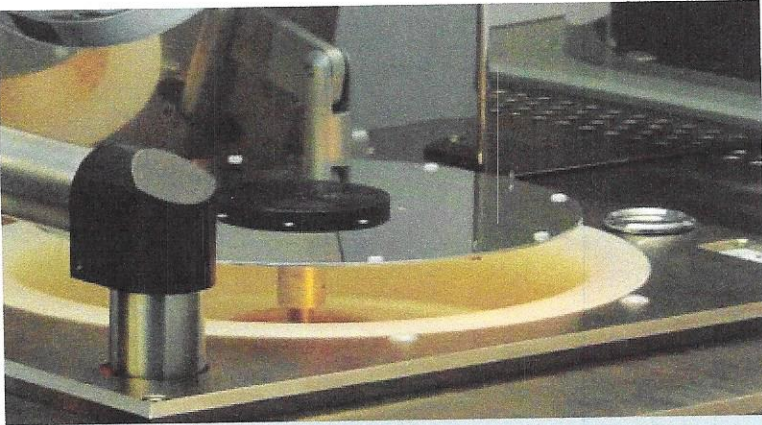
Quick Exchange
een a fixed or quick exchange
le. Easily removable for cleaning, the
e GYRSET® plate is simply locked
he hub.



Multi-Profile GYRSETS

Select the GYRSET® height according to the thick-
ness of your substrate. Use the table below to help
you choose the correct size.

	STANDARD (Fixed or Quick Exchange)		HIGH (Fixed or Quick Exchange)	
	Maximum Substrate Thickness (mm)	Maximum Spin Speed (rpm)	Maximum Substrate Thickness (mm)	Maximum Speed (r
Delta 80 GYRSET 8	4	3 000	12	3 000
Delta 80 GYRSET 5	5	5 000	12	3 000
Delta 80 GYRSET 3	5	7 000	12	3 000



LE AND FLEXIBLE

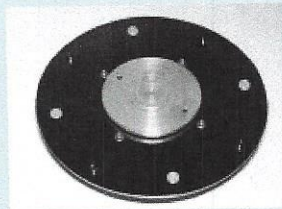
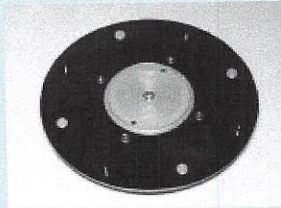
de (LC)* And e Chucks

double or single side chucks in 8", 2" s. The substrates are vacuum-locked sing. The vacuum patterns, support ing pins are designed according to your nd adapted to the options chosen.



For Small Pieces

ngle side chucks, these adapters allow pieces up to 2" on a larger size chuck.



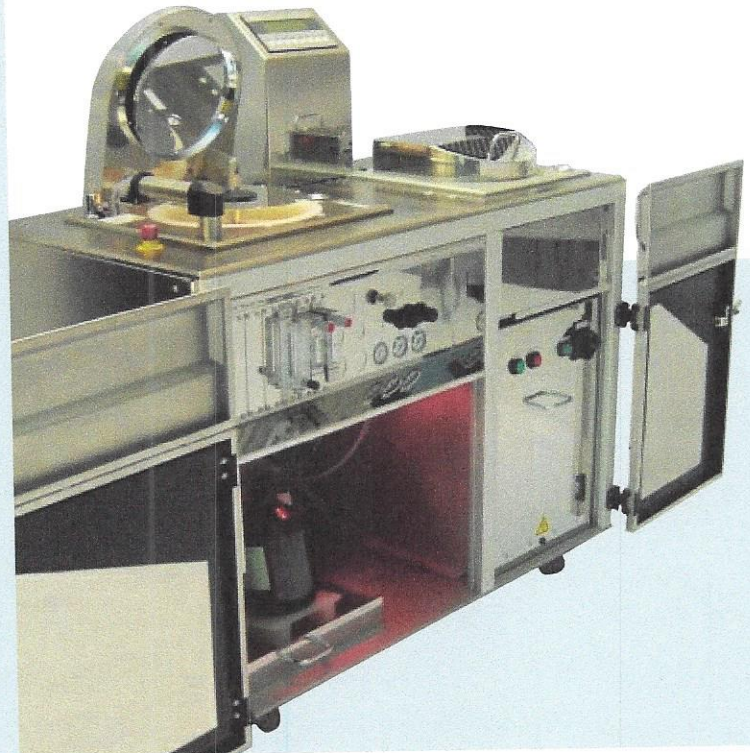
MODULAR OPTIONS

Dispense Arms (Options)

The DELTA 80 can be configured with two different dispense arms, either fully programmable electronic dispense or pneumatic driven dispense arm.

The programmable electronic dispense arm provides more flexibility. It is fully programmable in speed, acceleration and position and can be equipped with up to 6 media lines - maximum 4 resist lines and 2 solvent lines. It is also possible to fit the edge bead remover, nitrogen blow or bowl auto-clean option.

The pneumatic dispense arm can be equipped with only one resist line and has only two positions, home and dispense position.





Resist Remover (Options)

This programmable option removes the resist edge of the wafer. All tubing valves and pumps are included. Wafers up to 8" diameter can be processed.

Dispense Nozzle (Options)

This programmable option for solvent cleaning and for adhesion promoter includes all tubing, valve and flowmeter.

Blow (Options)

This option provides a flow of nitrogen across your wafer / substrate during processing and helps to remove any particles from the surface, thereby improving component. Includes all tubing, valve and flowmeter.

Cotton Candy Remover (Options)

This programmable solvent nozzle dispenses solvent onto the GYRSET® cover to remove stringers (cotton candy). It also cleans the process chamber before the process stops. It provides excellent results and reduces substrate contamination due to cotton candy effects.

Bowl Auto Clean (Options)

Programmable cleaning cycle cleans the chuck and the process bowl. The auto-cleaning frequency can be set either by time or numbers of cycles.

Resist Nozzle Auto Clean (Options)

This fully programmable option injects solvent onto the required dispense nozzle dissolving any residue and cleaning the inside of the nozzle.

Dispense Systems (Options)

Different high and low viscosity photo resist pumps are available. For more flexibility a programmable syringe dispense system is available.

Open Bowl (Options)

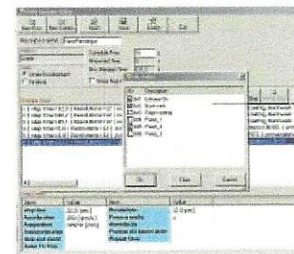
The open bowl option with the special sensor controlled adapter ring allows for conventional open bowl spin coating. The adapter permits speeds up to 10,000 rpm without GYRSET® cover and provides additional flexibility to process wafers or substrates.

Chuck Lift (Options)

Allows easy loading and unloading of the wafer combined with the standard chuck index for repeatable wafer positioning.

Laptop (Options)

The laptop option with a Windows® like user interface software allows for easy recipe programming and storage for an unlimited number of recipes.



Stainless Steel Cabinet

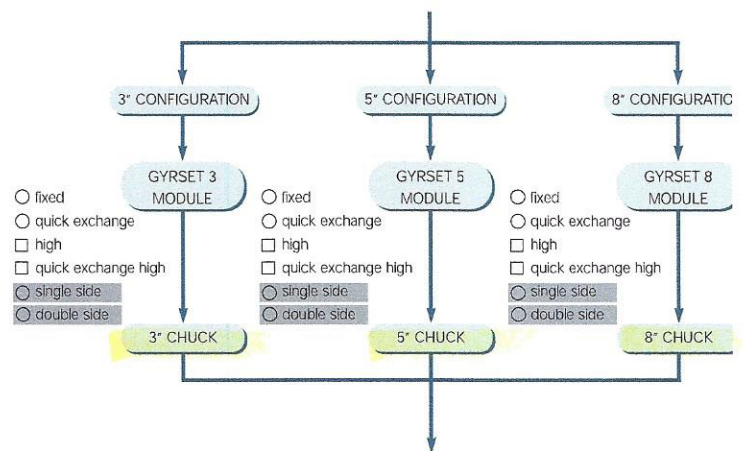
The stand alone cabinet integrates the SUSS DELTA 80 Spin Coater with selected options, like our DELTA 150 / 200 BM Hotplate Modules into a small footprint. The top plate with the front panels of the cabinet are made of polished stainless steel. Side and back panels are made of brushed stainless steel and are easily removed allowing easy access to all components.

The perforated top plate provides a laminar flow assuring proper ventilation through the process. For added safety and reduced contamination the media and electronic controller are separated. All connections for media and power are located on the back of the cabinet simplifying installation.

Special Requirements

If you have special requirements, the SUSS team will help you to define and support your particular need, whether for research or production.

DELTA 80 GYRSET®



Options

Stainless steel cabinet	Nitrogen blow
Programmable electronic dispense arm	Dispense pumps
Pneumatic dispense arm	Chuck lift-up / down
Programmable solvent dispense	Adapter for small substrates, up to 2
Resist nozzle autoclean	Laptop
Programmable bowl autoclean	Motor flange cooling
Edge bead remover	Open bowl spinning
Cotton candy remover	Pressure vessel systems + Media cabi
	Media filter systems

AL DATA

Wafer / Substrate Size

Wafer Size:	up to ø 8" (ø 200 mm)
Substrate Size:	up to 6" x 6" (150 x 150 mm)

DELTA 80 BM

Requirements

Voltage:	230 VAC / 50 Hz / 16 A
Compressed air:	5 - 6 bar / tube OD 8 mm
Vacuum:	min. - 0.7 bar / tube OD 6 mm
Nitrogen:	4.5 bar / tube OD 6 mm
Exhaust:	OD 100 mm (1x)

Dimensions

Spinner module (W x D x H):	443 x 440 x 830" (17.4" x 17.3" x 32.7")
	with open GYRSET cover and waste bottle
Controller (W x D x H):	465 x 386 x 133 mm (18.3" x 15.2" x 5.2")
Panel interface (W x D x H):	196 x 56 x 110 mm (4.3" x 7.7" x 2.2")

DELTA 80 T + T2

Requirements

Voltage:	400 VAC / 50 Hz / 16 A
Compressed air:	5 - 6 bar / tube OD 8 mm
Vacuum:	min. - 0.7 bar / tube OD 8 mm
Nitrogen:	4.5 bar / tube OD 8 mm
Exhaust:	OD 100 mm (3x)

Dimensions

Footprint (W x D x H):	1200 x 642 x 1317 mm (47.2" x 25.3" x 51.9")
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DELTA 80 T3

Requirements

Voltage:	400 VAC / 50 Hz / 16 A
Compressed air:	5 - 6 bar / tube OD 8 mm
Vacuum:	min. - 0.7 bar / tube OD 8 mm
Nitrogen:	4.5 bar / tube OD 8 mm
Exhaust:	OD 100 mm (3x)

Dimensions

Footprint (W x D x H):	1674 x 642 x 1317 mm (65.9" x 25.3" x 51.9")
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all process conditions and can vary according to equipment configurations. Not all specifications may be valid simultaneously. Design and specification of custom built machines depend on individual conditions and can vary configurations.



Syringe Dispense Option

DELTA SERIES

Semiautomated Process Equipment

The SUSS Delta Series offers a wide range of laboratory equipment that can process wafers or substrates ranging from pieces up to 22" diameter or 16" square. The Delta Series includes process modules for the following applications:

- Substrate Dryers
- Coating Systems
- Hot Plates
- Cool Plates
- Develop and Etching Systems
- Cleaning Systems
- Vapor Priming (HMDS)

For stand alone operation the Delta Series can be integrated into attractive stainless steel cabinets. The cabinets can support from one up to four different process modules. For example, it is possible to have a coater, vapor prime and hot plate module located in a single cabinet. The design allows our customers a great deal of flexibility configuring process equipment while minimizing space.

