

# IDI - CYBOR

## The Model 550 Chemical Dispense Pump



INTEGRATED DESIGNS, LP

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## The IDI M550

### For SOG and Low K Chemistries

For nearly a decade, IDI-CYBOR have been the leaders in innovative chemical dispense solutions. Based upon the field proven Pressure-On-Demand Technology, IDI-CYBOR introduces the M550 chemical dispense system for Spin on Glass (SOG) and Low K Dielectric applications.

Using IDI's patented pressure on demand (POD) technology, the M550 provides superior particle reduction, dispense accuracy, chemical minimization characterization, and high reliability in a compact design. With an MTBF of over 1 million dispenses with no schedule maintenance, IDI is continuing to lead the industry in quality and superior technology.

### Pressure on Demand using Helium

- Helium pressure on demand (POD) is utilized to push the chemical through the system out on to the wafer
- Through the manipulation of time and pressure, extremely accurate dispense volumes are achieved
- Using POD, chemicals themselves are not subjected to any sort of mechanical forces

### Superior Particle Reduction

Many of today's SOG and Low K chemical dispense systems for lithography track systems simply use a regulated pressurize vessel to dispense SOG and Low K chemicals onto the wafer. This strategy promotes the crystallization of SOG and particles within the pressurized vessel and through out the dispense lines. By using the M550, IDI customers have dramatically reduced particles and surface defects by virtually eliminating the possibility of SOG crystallization.

### Reduction in Chemical

By utilizing the variable rate dispense capability of the M550, a dramatic reduction of chemical can be realized. Variable rate offers four different dispense rates per recipe.

### Built-In Reliability

The M550 meets your demands and requirements for reliability. Our dedication to being the best shows through the M550's superior features:

- Precise variable rate chemical dispense every time
- Virtually no moving parts to break down
- CE certified
- Micro-bubble free dispenses
- Lower chemical consumption during filter change out
- Multiple footprints to optimize space utilization

### Flexibility

The M550 has the integrated support of Now Technologies PNP SmartProbe™ to meet the process protection needs of the fab. This chemical dispense system is controlled by sophisticated electronics that are driven by detailed, user friendly software for easier integration with process equipment.

The standard Model 550 will easily integrate with most track systems for greater flexibility. We've worked to create a system that is flexible and accommodating to a wide range of tubing and standard industry filters.

\* Patent Pending

# Introducing a Breakthrough in SOG and Low K Chemical Dispense

## The IDI Model 550

### Features:

- Helium Manifold
- Calibration free ultrasonic liquid level sensor
- Variable rate dispense
- Redundant overflow sensor
- Auto shut off from drain mode
- RS232/RS485 communications to host computer
- Source monitoring
- Adjustable suckback
- Windows 95/98/NT software program
- PFA injection molded Teflon blocks and valves
- Delta P filter change alarm indicator provides optimum filter usage
- Ability to use multiple size tubing with a simple fitting change (3/6, 1/8, 1/4, 4mm, 6mm)
- Multiple recipe select capability
- Integrated support of Now Technologies PNP SmartProbe™
- On board controller
- Two footprints to choose from (Model 550 and Model 550VT) for optimum space usage
- CE certified
- True point-of-use filtration
- Auto vent/Auto purge function
- All Teflon fluid path
- Source switching option for the 550VT

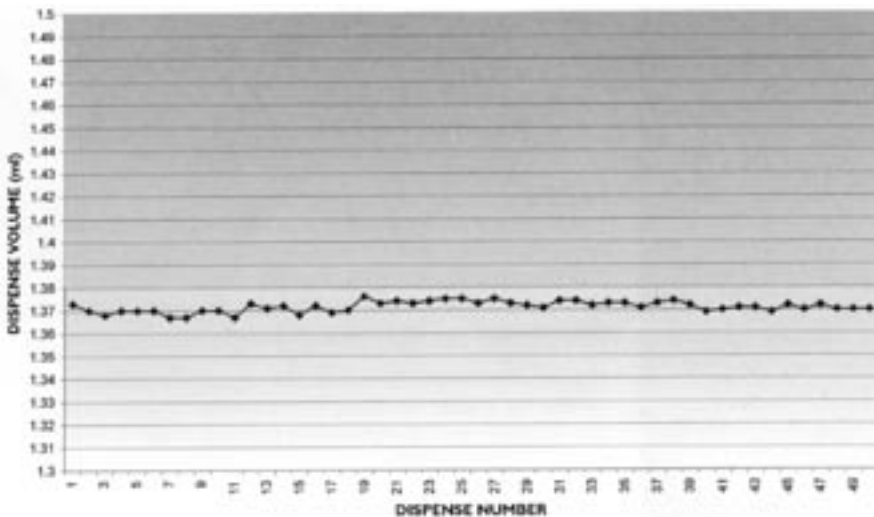
## Model 550 DATA SHEET

<b>Dispense Volume Repeatability</b>	Standard Deviation < .01 ml for .1 to 6 ml
<b>Dispense Rate</b>	0.1 20 ml/sec*
<b>Viscosity Range</b>	1-100 cP
<b>Maximum Differential Pressure</b>	30 psi minus the dispense pre
<b>Dispense Pressure Range</b>	0.1 15 psi
<b>Dispense Mode</b>	Constant or variable rate
<b>Suckback Volume</b>	Adjustable through suckback valve
<b>Purge Volume</b>	0.1 50 ml*
<b>MTBF**</b>	> 1,000,000 dispenses
<b>Filtration Rate</b>	0.1 20ml/sec*
<b>Filtration Type</b>	Pall or Millipore
<b>Filter Size</b>	2 inch
<b>Certification</b>	CE
<b>Input Voltage</b>	24VDC 500 ma (12 watts maximum)
<b>Size</b>	550 10.9"W x 4.9"D x 8.0"H 550VT 6.6"W x 4.4"D x 12.2"H
<b>Inlet Gas Type</b>	N2 and He
<b>Inlet Gas Pressure</b>	Regulated 70 psi @ 0.75 cfm
<b>Exhaust</b>	0.75 cfm

\*Dependent on one or more of the following variables: output line length and diameter, chemical viscosity, dispense pressure and time and filtration type

\*\* MTBF is defined as "true" Mean Time Between Failure, with no scheduled repairs or overhauls required.

### M550 Dispense Repeatability



**The Easy Choice...  
For Chemical Management Solutions**



**CYBOR**

by

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