

# PCT Megasonic Generators

## Megasonic HyperClean™ Generators

For over 20 years, PCT Systems, Inc. has pioneered and developed the leading megasonic technology available in the global market. With numerous patents and patents pending, customers around the world have come to depend on PCT Systems, Inc. for the highest quality and performance megasonic systems today. With the development of super fine geometries with more fragile structures and substrates, customers need more process development options than ever before to be successful, productive and profitable. HyperClean™ incorporates PCT's unique energy-transfer technology in a heated all-quartz unit for superior submicron cleaning, reduced operating costs and high reliability.

Megasonic Solutions for:

- Semiconductor
- MEMs
- Disk Drives
- Media Storage
- Flat Panel & Flex Displays
- Optics
- LED
- Solar
- Medical Devices
- R&D Labs

Model 9400 Universal Generator



Model 6000 Series Generator



Power **ANY** Brand  
Transducer Plate with a  
PCT Megasonic  
Generator and See  
Improved Performance

Megasonic performance starts with the generator and not all generators are created equal. Simply put, PCT offers the most versatile and fully featured megasonic generators on the market.

### Unmatched Process Control & Flexibility

No matter what the application, PCT HYPERCLEAN™ Megasonic Generators have become the standard by which others are measured. No other manufacturer's generators are able to drive virtually any make megasonic transducer array. So whether a new system or replacement generator is needed, PCT can provide Process improvement with our patented HYPERCLEAN™ technology.

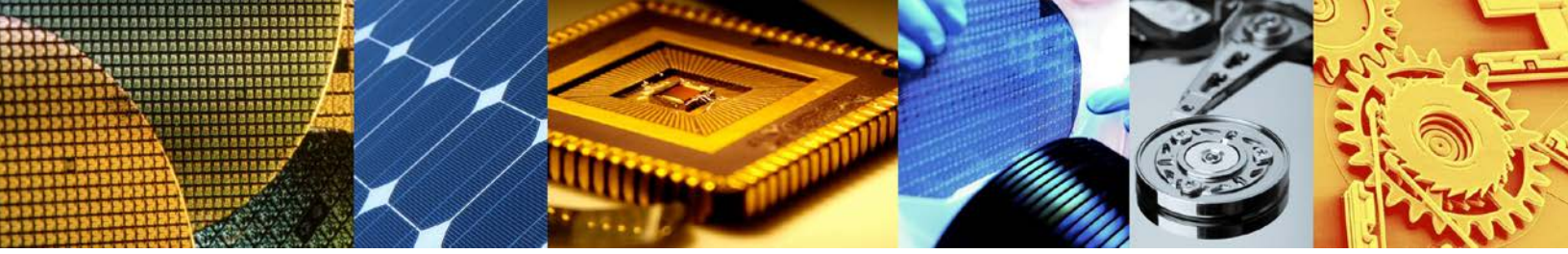
PCT Systems, Inc. offers complete HYPERCLEAN™ Megasonic Systems including a wide tank selection of quartz, plastics and stainless steel for any size application or substrate. Customizable transducer arrays in either direct bond or indirect transfer configurations to offer an unequalled selection for users to optimize their systems.

### PCT's Series 9400 Universal Generator

- Active Phase Shifting for 3 Dimensional Control of Megasonic Energy
- Individually Configurable and Tunable for Optimum Process Results
- Independent Power and Frequency Control
- Programmable Up to 8 Step Changes per Channel
- Programmable RF Output Range up to 500 Watts per Channel
- 4 Independent Channels with 2 outputs per Channel
- Synchronized or Individual Control of Each Channel
- Multiple Frequency Bands Individually Controlled
- Patented Multiplexing for On/Off Control of Individual Transducers
- Enhanced Data Logging with 1GB Storage
- All Process Variables, Real Time Data Monitoring and Trend Analysis
- Universal Application for Most Competitive Transducers — No Matching Required
- Over 90%+ Efficiency from Smallest Size of all Competitive Units
- Smallest Footprint and Space Requirement — Reduced Need for Multiple Generators
- And more . . . .

PCT Systems  
44060 Old Warm Springs Blvd.  
Fremont, CA 94538  
Phone 510-657-4412  
Fax: 510-657-0112  
Email info@pctsystems.com  
Web www.pctsystems.com





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	<b>Model 6000 Series Generator</b>	<b>Model 9400 Universal Generator</b>	<b>Model 9200 Mini-Meg Generator</b>
<b>Dimension</b>			
Width	14.0"	12.5"	12.5"
Length	14.0"	14.0"	14.0"
Height	7.0"	3.5"	3.5"
<b>Megasonic Amplifier Operation</b>			
Controller	Multiplexing operation for 2-8 transducers per output. Optional embedded temperature controller for heaters	Independent Power & Frequency Control for each RF Output	
Number of Channels	2	4	2
Number of Outputs per Channel	8	2	2
Maximum RF Output/Channel	350 watts	500 watts	500 watts
Maximum RF Output per Unit	-	2000 watts	1000 watts
Programmable RF Output Range	0 to 350 watts per Channel	0 to 500 watts per Channel	0 to 500 watts per Channel
Programmable Recipes / Channel	-	8	8
Frequency Changes / Recipe	-	4	4
RF Output Power Tolerance	+/- 10%	+/- 10%	+/- 10%
Frequency Bands	600Khz-1MHz	500Khz-1MHz 1.0-1.5 MHz 2.0-2.5 MHz	Choice of 1 450kHz, 750kHz, 950kHz
<b>Mechanical Specifications</b>			
Materials & Mounting	Anodized Aluminum with Horizontal or Vertical Mounting Options		
<b>Electrical Specifications</b>			
Voltage Rating	208-240 VAC, 50/60 Hz		
Current Rating	Max 10 amps non-heated (Max 30 amps heated with Model 6000)		
Environmental Operating Range	0° to 27°C Operating Range, -25° to 50°C Storage Temperature Range		
Frequency Resolution	100 Hz		
Frequency Accuracy	+/- 100 Hz		
Programmable Sweep Functionality	1-10 KHz		
RF Output Connectors	DB15F		
<b>External Interface</b>			
External Interface	DB15 Male Connector, +5v Loopback - Pin 10, Liquid Level - Pin 4, Ground - Pin 8, 9, 12,		
Communication Ports	SECS II: RS232: DB15 Male connector, Receive – Pin 6, Transmit – Pin 7,		
Transducer Connections	DB15 Female connectors for each array/channel		
<b>Displays/User Interface/Data Storage</b>			
Display	4 Line 40 Character LCD with keypad or PDA/LCD Touch Screen Monitoring for Frequency vs. Time, Power vs. Time, and more		
Data Storage Capacity	2 GB		
Data Export	XML Format		
<b>PCT Certifications</b>			
ETL File No. 567511 per UL 3101-1 and CSA 1010.1			
CE EN 61010-1 European Safety Approval			
CE EN 55011 European EMI Approval			
CE EN 50082-2 European ESD, RF, and Transient Susceptibility Approval			

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