

## THE CADENCE STEAM AGING SYSTEM

The Cadence Steam Aging Systems are designed to meet military and commercial Hi-Rel specifications (MIL-STD 202, Method 208 and others) for artificial aging of all electronic components and circuit boards, including high density, discrete components, relays, transistors, capacitors, including SMT and axial components.

*Automated system designed to meet military and commercial Hi-Rel specifications (MIL-STD 202, Method 208) for artificial aging of electronic components and circuit boards, including high density, discrete components.*



**2010 Cadence System**  
Large Capacity Stainless Steel Steam Chamber

The Cadence Systems come in 2 configurations, the standard configuration offers a single steam chamber for large components. The DX features 3 individually timed, ESD protected drawers with a unique closure mechanism that reduces steam escapement during drawer removal. All systems provide complete monitoring and control of steam or water temperature and feature automatic timing of the test duration.

Process Area	Water Type	Temperature Control	Large Steam Chamber	Plumb Type	Batch Steam Drawers (3)
12 x 12" 305 x 305 mm	Distilled or De-ionized	PID	Standard	Carboy or Direct	Option

### BENEFITS

- Industry's Most Precise Steam Aging Control
- Complies with Hi Rel | Mil Compliance Testing
- Large Process Area or 3 Drawer (DX)
- Report Logs for Tracking | Certification
- Small Footprint | Lab Processing
- Autonomous | Minimal Operator Intervention

### APPLICATIONS

Artificial steam aging of components must occur over a very narrow temperature range, typically at 93 C +/- 3 degrees. The Cadence Steam Aging Systems are the only systems currently on the market that meet this precise control requirement. This thermal accuracy makes the Cadence Systems ideal for component manufacturers and military, commercial, and industrial end users.



## FEATURES

- Constant Digital Display
- Large Tray or 3 Drawer (DX)
- Continuous 99+ Hour Operation
- Fully Programmable
- Audible Alarms
- Microprocessor Controlled

## OPERATION

Dozens of different product types and tests can be run at the same time. The user simply sets the timer to specify the duration of the test, loads the product and the process will automatically take place and alert the operator when complete.



**2010 Cadence DX System**  
*Three Process Drawers for Batch Processing*

Constructed of treated stainless steel, the Cadence is virtually unaffected by de-ionized or distilled water. Elapsed time and cycle time are indicated digitally. The cycle timer will not time the cycle unless temperature is within process parameters. Boiler temperature control is accurate to  $\pm 2^{\circ}\text{C}$  from pre-set, with a readout provided. Condensation is always kept away from components. Extensive indicators display operating condition. Select the water source for each system configuration: either carboy stand-alone or inline pressurized water.

## STANDARDS COMPLIANCE

- JEDEC JESD22-B102D
- Mil-STD-202 Method 208
- ANSI-J-STD-002
- ANSI-J-STD-003
- IPC/EIA J-STD 002B/C

## SAFETY | EASE OF MAINTENANCE

Steam is always safely vented and safety features prevent leakage, over temp and insufficient steam.

The unit automatically shuts down at the end of the pre-programmed cycle. The cover is designed so that steam is condensed and channeled to the side. Temperature controllers monitor for over-temp and insufficient water and will automatically shut the system down when triggered.



**2010 Cadence System**  
*Touch Screen Control Panel*

The stainless steel steam vessel is un-impacted by de-ionized, distilled or de-mineralized water. The external coating is high durability to handle the occasional water exposure. The Cadence System is virtually maintenance free.

## SPECIFICATIONS

### CONTROL

Commercial touch screen PLC controls delivers precision temperature and duration control. Easy programming via touch screen panel. Extensive 99+ hour duration allows round-the-clock processing of samples in a single or multi-batch set-up. Precise closed-loop temperature control for precision aging. One year warranty. Made in the USA.

### STEAM MANAGEMENT

Operation	Automatic
Test Duration	8 Hours Standard   Emulates 1 Year Aging Duration Timer (1 – 99+ hours)
Thermocouple	Selectable Thermocouple ( <i>Water or Steam</i> )
Accuracy	± 2°C Steam
Steam Chamber Insulation	High-Density Ceramic Wool
Standard Process Area ( <i>W x L x H</i> )	12 x 12 x 2+”   305 x 305 x 50+ mm
DX Process Area   Drawers ( <i>W x L x H</i> )	3 Drawers   Each with 3 Configurable Sections 3 x 9.5 x 0.86 ” <i>per Drawer</i> 76 x 305 x 51 mm <i>per Drawer</i>

### OPERATION

Temperature Control	100°C Max   PID Proportional
Programming	Touch Screen
Water Capacity	1.25 gal   4.73 L
Pressure Regulator	5 PSI Max Regulator   Pressurized Configuration
Data Recording & Export	Option   Export Download
Safety	Automatic Low Water Shutdown High Water Overflow to Drain Over Temperature Shut Off Caution Light Illuminates Above 40°C

### PHYSICAL

Electrical	110 VAC   1 Ø   60Hz   15 Amps
Water	
Construction	Stainless Steel Wet Surfaces Epoxy Coated External Surfaces
Water Type	Demineralized or Deionized Water ONLY
Plumbing Connection	Specify Carboy   ¼” poly quick connect Specify Pressurized   ¼” pipe (female) Drain   ¼” pipe (female)
CE   UL	CE & UL Compliant
Dimensions   Footprint ( <i>W x D x H</i> )	24 x 16 x 18”   615 x 410 x 460 mm
Ship Weight	40 lbs   18 kgs

## PROVEN IN THE FIELD

RPS Automation has 20+ years of soldering automation expertise with hundreds of customers and installations worldwide. There is no greater testament to the success of RPS than the words of our customers. We are honored to have served these customers, many of who are listed below.

3M	Circle Prime	International Rectifier	RSCC Aerospace
ABX Engineering	Creation Technologies	Kuchera	Radiall
ACI Naval Facility	Cobham Defense	Lectronix	Rochester Electronics
AEES	DRS	Lockheed Martin	Saline Lectronics
Aclara RF Systems	EI Microcircuits	Micro Consulting	Sensata
Aerotech	Edge Circuits	Mirac	Siemens
Aeroflex	Electrosem	Molex	Silicon Forest
Alcon Laboratories	Emerson	NASA	Smith & Associates
AppliCAD	Epic Technologies	Northrup Grumman	Synapse Electronique
August Electronics	GE Aviation	Novatemp	Sypris
Ayrshire	Garmin	Odyssey	Tesla Motors
BAE Systems	Griffin Instruments	Omnicon	TRW
Banner Engineering	Guardian Electronics	P3C	Tyco Automotive
Boeing	Hanson Electronics	Pemstar	US Navy   NSWC
Burton Industries	Honeywell	Pinnacle	Vishay
CIL	II Stanley	Point Six Wireless	Visteon
Cardone	Inservco	Premier Semiconductor	Worthington Electronics

## COMPANY PROFILE

RPS Automation LLC is a privately held company that designs and manufactures a complete line of innovative and advanced automated selective soldering, lead tinning and solderability test equipment for aerospace, military, communications and medical device manufacturers to industrial OEM's, auto manufacturers and contract manufacturers big and small. The company has over 500 installations and 300 global customers. All systems are made in the USA and feature precision robotics and thermal control, and top of the line components. All systems feature easy to use controls, extensive warranty coverage, and exceptional service.

### THE RPS CUSTOMER COMMITMENT

RPS will design and manufacture reliable, high quality, soldering automation and solderability test systems. RPS systems will help customers reduce manufacturing costs and improve the speed, quality, and productivity of their electronics manufacturing. RPS will provide a customer experience based on honesty, integrity and a dedication to customer satisfaction; one customer at a time.

# RPS

*One Customer at a Time™*

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