

**RH-Pro11**  
HIGH-VELOCITY HOT AIR STERILIZERS

**RH-Pro9**  
HIGH-VELOCITY HOT AIR STERILIZERS



# **RAPIDHEAT™ HVHA STERILIZERS**

## **Cutting-Edge High-Velocity Hot Air**



F E A T U R I N G

**New High/Low Temperature Sterilization  
and Decontamination in a Single Unit!**

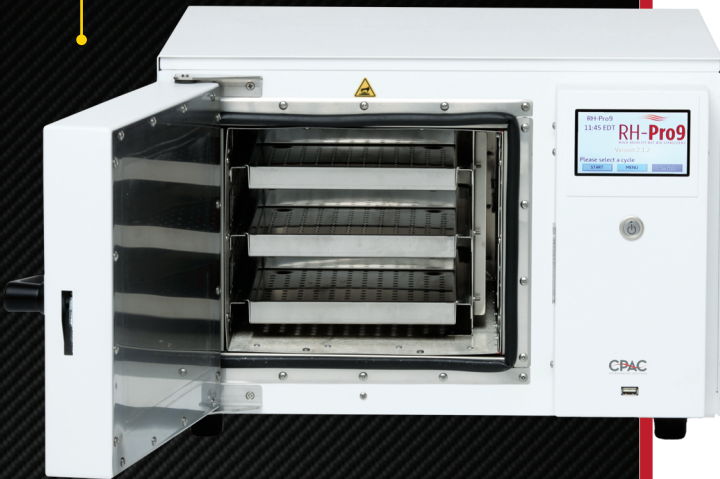


**NO WATER • NO DRYING • NO CORROSION • NO MAINTENANCE**

# THE HIGH-VELOCITY HOT AIR (HVHA) **ADVANTAGE**

## ▶ **RH-Pro9**

- Compact design
- Three large trays
- Fits in most cabinets



## **RAPIDHEAT HVHA STERILIZER Features:**

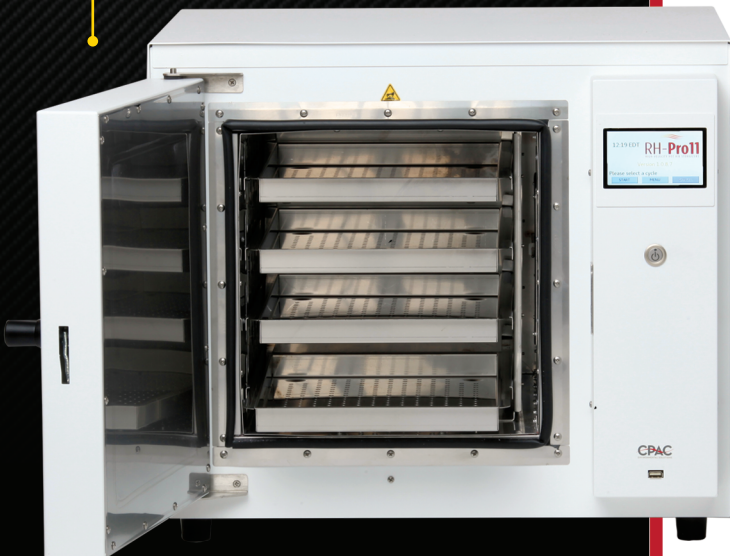
- Rectangular chambers with more uniform capacity
- Easy and simple touch screen operation
- Non-corrosive waterless environment
- Quiet operation with **NO** emissions
- Uses 85% less energy than steam

## **RAPIDHEAT HVHA STERILIZER Benefits:**

- Faster sterilization reduces workarounds
- No drying cycle means no short-cuts or delays
- No more wet wraps and instruments
- Saves \$\$ on instrument replacement from corrosion
- Eliminates high sterilizer maintenance and repair costs

## ▶ **RH-Pro11**

- High-volume capacity
- Four large trays
- Handles large instrument cassettes



## **CONSIDERATIONS FOR Choosing the Right Size**

- Need to conserve counter space - **RH-Pro9**
- Require larger single load capacity - **RH-Pro11**
- Need ease of mobility and handling - **RH-Pro9**
- Using large cassettes and packs - **RH-Pro11**

**Both units are extremely low-maintenance and feature the same “fast” instrument turn-around that has become the hallmark of RapidHeat Sterilization.**

# IT'S NOT JUST DRY HEAT!

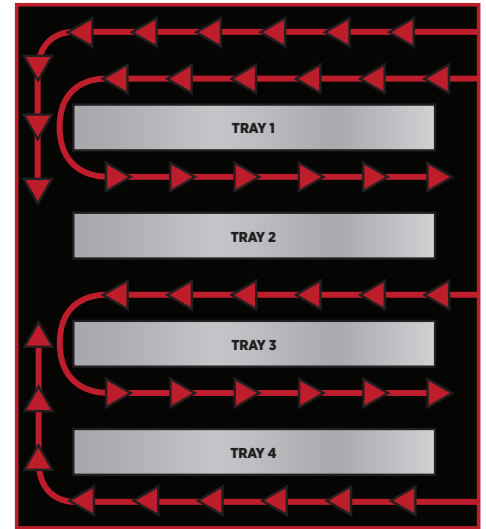
Unlike traditional Dry Heat, RapidHeat™ is an advanced thermal sterilization technology circulating high velocity hot air in a sealed chamber at 200 to 300 air exchanges per minute. RapidHeat sterilization technology is designed with features to improve the efficiency of all dental and healthcare practices where tabletop sterilizers play a critical role in the sterilization of medical devices.

## RapidHeat Sterilization

RapidHeat Sterilization Technology has evolved from NASA's early space exploration requiring an environmentally and ecologically safe and efficient method to decontaminate space vehicles. Today, this technology, described as "High-Velocity Hot Air" (HVHA) Sterilization has been applied to tabletop sterilization systems that provide fast, waterless, chemical-free, maintenance-free processing of medical instruments.

## Ease of Operation

HVHA Sterilization is activated by a simple push of a cycle button. Since there is no steam pressure, the complete cycle from door closed to door open is 20 minutes for wrapped instruments. Each cycle is documented with internal storage for easy retrieval at any time via a USB Flash Drive. Since HVHA sterilization operates at very low wattage, you can leave the system running all day with very little energy cost.



*HVHA Sterilization moves heated air rapidly and provides shorter start-to-finish pre-set cycles as well as faster, more effective sterility.*

## RapidHeat vs. Steam

FEATURE COMPARISON

**RH-Pro11**  
HIGH-VELOCITY HOT AIR STERILIZERS

**RH-Pro9**  
HIGH-VELOCITY HOT AIR STERILIZERS



Sterilizer Feature	RapidHeat™	Steam
Start to Finish Sterilization Cycle	12-20 Minutes	61-116 Minutes
Sterilizer Operation	Simple	Complex
Water Requirements	None	Distilled Water
FDA 510(k) Cleared	Yes	Yes
Cycle Documentation	Yes	Yes
Instrument Drying Cycle	None Required	FDA Required
Potential for Instrument Corrosion	None	High
Energy Use (kWh/cycle)	11¢/cycle	74¢/cycle
Maintenance and Repair Cost	80¢/cycle	\$6/cycle

### NOTES:

- Start to Finish Cycle represents the time range for sterilizing unwrapped, pouched, and wrapped (cassette/tray) instruments from cold start to finish (includes dry cycle for steam).
- Sterilizer Operation reflects the level of sterilizer preparation and management for instrument processing.
- Potential for Instrument Corrosion is absent in the dry environment of a RapidHeat sterilizer and high for instruments in a steam environment.
- Energy Use represents kilowatts of power used per hour when operating a sterilizer cycle. This study was conducted by the Rochester Institute of Technology comparing RapidHeat to 2 popular tabletop steam sterilizers.
- Maintenance and Repair Cost is based on actual reported costs and estimated over useful life.

## The RH-Pro9 and RH-Pro11 Features:

# Low-Temperature sterilization and N95 Mask Decontamination Cycle options add significant flexibility to any practice's sterilization process.

Recognizing the need for low-temperature cycles for both sterilization of heat-sensitive medical devices and the decontamination of N95 FFR Masks during pandemic shortages, CPAC has incorporated universal processing versatility into its standard RH-Pro11 and RH-Pro9 Sterilizers.

### Low-Temperature Cycle Options

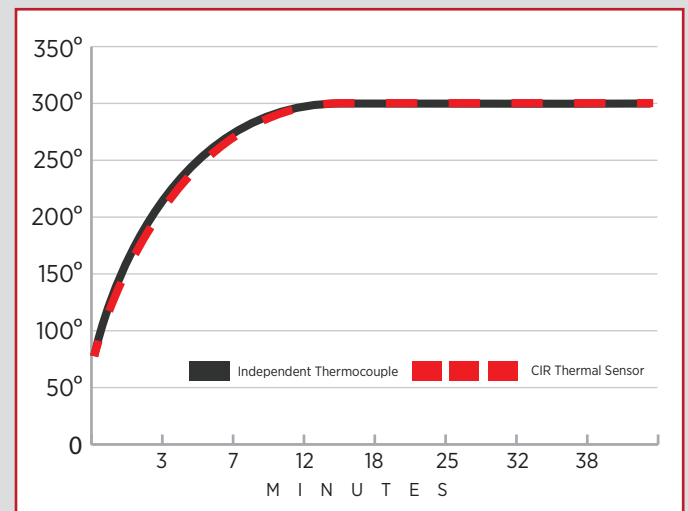
CPAC has created low-temperature cycles to process devices/instruments that are known or could potentially become degraded by RapidHeat's standard High-Temperature cycle of 375°F.

- Allows user to validate and verify 12-log kill sterilization
- Choice of three low-temperature cycles
- Eliminates heat-sensitive device concerns
- Time/temperature profiles equivalent to steam

### Mask Decontamination Cycle Resolves N95 FFR Mask Shortages

Under FDA's EUA granted during the recent COVID-19 pandemic, CPAC created a special cycle to decontaminate N95 masks that are in critical shortage.

- 34-minute cycle @ 175°F
- Assures mask returns to original user
- Maintains mask performance/function over multiple cycles
- No drying or aeration required



*CPAC's CIR™ Thermal Sensor has been validated through thermocouple comparisons to be within 0.5 degrees F as measured on stainless steel instruments during sterilization cycle trials.*

### NEW CIR Thermal Sensor Replaces Chemical Indicators

To independently measure and confirm load exposure to the conditions required for all RapidHeat cycles, CPAC provides with each sterilizer a CPAC CIR™ Thermal Sensor. The CIR Thermal Sensor has been designed to replace often unreliable and inaccurate chemical indicators.

- Independent confirmation of each cycle time-temperature profile
- Eliminates dependency on fallible chemical indicators
- Confirms the time-temperature required to achieve spore inactivation
- Demonstrates correlation with sterilizer-controlled time-temperature



## QUESTIONS & ANSWERS

# RapidHeat™ Low-Temperature Sterilization Cycles

### **Why have you created low-temperatures cycles?**

Low-Temperature cycles were created to expand the RapidHeat Sterilizer's ability to process instruments at lower temperatures that manufacturers have only validated for steam sterilization.

### **Does that mean I can use a RapidHeat low temperature cycle on the same plastic devices I have been sterilizing in an autoclave?**

**Yes!** Many reusable medical devices are manufactured from inexpensive, temperature-sensitive plastics such as Polypropylene (PP). Traditionally, these instruments have only been compatible with autoclave temperatures.

### **How do I know which of the three cycles to choose?**

Selection can be based on the instrument manufacturer's maximum temperature recommendation. You can also consult with us or use your discretion in choosing the appropriate temperature setting.

### **Are there load limitations for Low-Temperature cycles and can I mix instruments?**

**Yes**, as with an autoclave there are load limitations, BUT you don't have to worry about mixing instruments as would with an autoclave. For example, there's no problem sterilizing a carbon and stainless steel instrument in the same pouch.

### **Can I use the same chemical indicator that I use in my autoclave to validate that my load is been exposed to the time-temperature cycle required for sterilization?**

**NO**, Chemical Indicators used for steam cannot be used for our sterilizers.. They are unnecessary since we have provided a CIR™ Thermal Sensor that independently documents the load time-temperature profile of a challenge instrument or pouch during the sterilization cycle.


### **Can I use the same sterilization pouches that I used for my autoclave for RapidHeat Low- Temperature sterilization?**

**Yes you can.** Steam (autoclave) pouches are designed for up to 320°F., therefore you can use them in all 3 of our low temperature cycles. Just don't rely on the color change of a chemical indicator that has been imprinted on the pouch – instead rely on our CIR Thermal Sensor.



For other questions, please call CPAC Customer Service at 800-828-6011, or visit CPAC.com.

# RH-Pro9 AND RH-Pro11 Specifications

<b>ELECTRICAL RATING</b>		
RH-Pro9/Pro11 115 VAC	120 VAC +/- 10%, 60Hz, 12 Amps • 1400 Watts warm-up, 300 Watts operating Transient Over-Voltage Category II Applies	
RH-Pro9/Pro11 230 VAC	230 VAC +/- 10%, 50/60Hz, 6 Amps • 1400 Watts warm-up, 300 Watts operating Transient Over-Voltage Category II Applies	
Instrument/Material Compatibility	Identical Compatibility of Materials and Instruments for RH-Pro9 and RH-Pro11 Instrument Sterilization	
<b>DIMENSIONS</b>	<b>PRO 9</b>	<b>PRO 11</b>
Weight	68.2 pounds (31 kg)	90 pounds (41 kg)
Width (OD)	19.63" (572mm)	22.5" (572mm)
Depth (OD)	20.00" (508mm)	22.5" (572mm)
Height (OD)	13.75" (349mm)	19.5" (495mm)
Chamber Dimension	9.5" (241mm) W • 15.6" (396mm) D 7.85" (199mm) H	11" (279mm) W • 17.75" (433mm) D 11.75 (299mm) H
Chamber Capacity	1163 cubic inches • (5 gal/19 liters)	2294 cubic inches • (10 gal/38 liters)
Instrument Tray (ID)	7.3" (76mm) W • 12" (305mm) D • 0.85" (22mm) H	9" (229mm) W • 15" (381mm) D • 1" (28mm) H
Instrument Tray Capacity (Total)	223 sq. inches (3 Trays)	540 sq. inches (4 Trays)
<b>STERILIZATION CYCLE TIMES</b>	<b>PRO 9</b>	<b>PRO 11</b>
<b>STANDARD HIGH-TEMPERATURE</b>		
Unwrapped	6 Minute Cycle; 14 Minutes	6 Minute Cycle; 14 Minutes
Handpieces	8 Minute Cycle; 16 Minutes	8 Minute Cycle; 16 Minutes
Wrapped/Pouched	12 Minute Cycle; 21 Minutes	12 Minute Cycle; 21 Minutes
Wrapped Cassettes	12 Minute Cycle; 36 Minutes	12 Minute Cycle; 40 Minutes
<b>STERILIZATION CYCLE TIMES</b>	<b>PRO 9</b>	<b>PRO 11</b>
<b>LOW-TEMPERATURE STERILIZATION</b>		
320°F (160°C)	36 Minute Cycle	42 Minute Cycle
300°F (149°C)	56 Minute Cycle	58 Minute Cycle
280°F (138°C)	126 Minute Cycle	126 Minute Cycle
<b>N95 FFR MASK DECONTAMINATION</b>	<b>PRO 9</b>	<b>PRO 11</b>
175°F (79.5°C)	30 Minute Cycle	30 Minute Cycle
<b>INSTRUMENT CAPACITY</b>	<b>PRO 9</b>	<b>PRO 11</b>
Unwrapped	2.4 kg; 120 Dental Instruments	3.2 kg; 160 Dental Instruments
Handpieces (Unwrapped)	15 Handpieces; 5 per Tray	24 Handpieces; 6 per Tray
Wrapped Instruments	2 kg; 8 Dental Instruments/Pouch; 4 Pouches/Tray; 3 Trays/Load Total Instruments/Load: 96	3.2 kg; 8 Dental Instruments/Pouch; 5 Pouches/Tray; 4 Trays/Load Total Instruments/Load: 160
<b>WRAPPED CASSETTES</b>	<b>PRO 9</b>	<b>PRO 11</b>
5.5" x 8" x 1.5"	3 Cassettes (Total: 24 Instruments)	8 Cassettes (Total: 64 Instruments)
6" x 8" x 1.5" (2-Tier)	3 Cassettes (Total: 54 Instruments)	No 2-Tier Cassettes
8" x 11" x 1.5"	No 8" x 11" Cassettes	4 Cassettes (Total: 80 Instruments)
<b>ENVIRONMENTAL OPERATING CONDITIONS (INDOOR) - STANDARD STERILIZATION CYCLES</b>		
Temperature Range of 5°C to 40° C (41°F to 104°F) • Operating Temperature of 375°F (190°C) • Maximum Relative Humidity of 80% up to 31°C (88°F). Decreasing linearly to 50% at 40°C (104°F) • Pollution Degree 2 applies in accordance with IEC 664 • Maximum altitude of 2000 meters (6562 ft.)		
<b>CERTIFICATIONS</b>		
Markings	UL, CE, US 	
FDA 510(k)	K872643A; K881371	
Warranty	3-Years (Parts & Labor)	
Patents Pending		