

***HOT SHOT***®

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**OVEN & KILN**

**USER MANUAL**  
**LOW TEMP CERAMIC OVENS**



The Hot Shot Oven is a state of the art, table-top, heat treating oven capable of reaching and holding temperatures up to 2200°F. Heat Treating Ovens can be used to heat such things as glass, cylinder heads, welded and carbon steel joints, pumps, various mechanical plates, ceramics, etc.

## IMPORTANT SAFEGUARDS

### READ ALL INSTRUCTIONS

#### POTENTIAL HAZARDS

- **Electrical shock hazard** – unplug the kiln from the electrical service before cleaning or servicing. Do not touch heating elements with anything
- **Burn hazard** – Always wear protective clothing, gloves, and eyewear when working around the kiln. Use special care when opening a hot kiln as the escaping heat can cause severe burns. Keep unsupervised children away from an operating kiln
- **Fire hazard** – Do not place the kiln on a combustible surface. Allow at least 3 inches of airspace around the kiln and do not store any flammable or combustible materials nearby

Fumes and/or smoke may be present during the kiln break-in period or during heating of certain materials. Be sure to provide adequate ventilation

Locate the kiln in a covered but well-ventilated area away from flammable materials. Do not operate the kiln outdoors or in wet conditions

#### CLEANING

The inside of your kiln can be vacuumed using a soft brush attachment to remove dust and debris. A vacuum with a HEPA filter is recommended. The outer surfaces can be wiped clean with a damp cloth or sponge. Do not use harsh cleaning chemicals on the painted surfaces of the kiln.

#### USER MAINTENANCE

The floor of your kiln is removable to allow for replacement due to wear and tear or to aid in set up of materials that will be fired in the kiln.

Servicing of any other components shall be done by an authorized Hot Shot Oven & Kiln service representative.

### SAVE THESE INSTRUCTIONS



## OVEN + KILN WARRANTY

All Hot Shot Oven & Kiln, oven and kilns are warranted against defects in material and workmanship for 12 months. Hot Shot Oven & Kiln will repair or replace (at our option), at no charge, any part(s) found to be faulty during the warranty period specified. The oven/kiln will be free of defects in workmanship and materials when used under normal and proper operating conditions. The oven and kiln warranty repairs must be performed by/at Hot Shot Oven & Kiln facility.

### OBLIGATIONS OF THE ORIGINAL OWNER

Provide written proof of date of purchase. Notify Hot Shot Oven & Kilns immediately after defect has been discovered. Transportation of oven/kilns to Hot Shot Oven & Kiln is the responsibility of the original purchaser. Return transportation back to the customer is provided by Hot Shot Oven & Kiln when the oven/kiln is in-warranty.

**FOR WARRANTY REPAIRS:** Warranty repairs should be handled through Hot Shot Oven & Kiln who will arrange for any repairs or replacement of parts under the terms of this warranty. Otherwise, the defective part may be returned (postage prepaid) to Hot Shot Oven & Kiln at 2305 Stonebridge Rd, West Bend, WI 53095. If, after factory examination, the original part is found to be defective, a new or repaired part will be shipped prepaid by Hot Shot Oven & Kiln. If the entire oven is to be returned to the factory, all transportation costs will be done by the purchaser. The purchaser should notify Hot Shot Oven & Kiln (262) 361-4912 prior to shipping for a Return Materials Authorization (RMA) Number. Hot Shot Oven & Kiln will help advise if it is necessary to return the entire oven or only certain parts. Warranty work will be performed within 3 business days after defective part is returned to the factory. Hot Shot Oven & Kiln reserves the right, at its option, to replace the entire oven or any part of it in order to fulfill its obligation under this warranty.

### THIS WARRANTY DOES NOT COVER:

- Ovens altered in any way, abuse or neglect, moisture, improper storage or installation.
- Ovens over fired (reaching temperature higher than melting point of ware inside oven) regardless of cause.
- Ovens operated on incorrect voltage. Improper electrical installation. Knife Blade furniture or ware other than Hot Shot Oven & Kiln made.
- Ovens used for salt firing.
- Ovens used for Nitriding.
- Ovens used for purposes other than the firing of heat-treating various metals.
- Ovens operated more than the temperature on the rating plate.
- Damage to Property or personal injury that may occur from ovens that are fired on or near wood floors or combustibles.
- Damage to property or personal injury that may occur from improper ventilation of the work area and building structure.

This warranty is in lieu of all other warranties, expressed, or implied.

### EXCLUSIONS OF THE WARRANTY

This warranty does not cover any of the following: accident, misuse, fire, flood, and other acts of God, acts of terrorism, nor any contingencies beyond the control of Hot Shot Oven & Kiln, including but not limited to water damage, incorrect line voltage, improper installation, installation where this unit will not meet local electrical codes, missing or altered serial numbers, and service performed by an unauthorized facility. Hot Shot Oven & Kiln's liability for any damages caused in association with the use of Hot Shot Oven & Kiln's equipment shall be limited to the repair or replacement only of the Hot Shot Oven & Kiln's equipment. No person, agent, distributor, dealer, or company is authorized to modify, alter, or change the design of this merchandise without express written approval of Hot Shot Oven & Kiln.

**Liability Limitation:** In no event shall Hot Shot Oven & Kiln be liable or responsible for consequential, incidental or special damages resulting from or related in any manner to any Hot Shot Oven & Kiln product, third party installation(s), manufactured or distributed, or parts thereof.

Hot Shot Oven & Kiln does not accept returns on units that have been burned in or fired.

### INTERNATIONAL + CONTIGUOUS WARRANTY

Due to the shipping distance Hot Shot Oven & Kiln has created separate warranty terms for all units shipped outside of the continental US including Hawaii and Alaska. This warranty is still valid for the full 12 months however, the customer will be responsible for all shipping costs including customs, taxes and fees for any replacement parts or if the unit needs to be sent in for any inspection deemed under warranty.

## SAFETY RECOMMENDATIONS

Your heating element is made from Kanthal Ni-Chrome wire, allowing cold air to enter a hot oven will harden your element and make it become brittle. Never use compressed air or fans to force cool the oven, always close the door and let the oven cool on its own, this will keep your heating element annealed.

Our cool touch technology, with the fan running, should keep the outer surface within 20°C of room ambient temperature.

1. Install on a 15 or 20 amp 120 or 240V circuit (will depend on what's ordered).
2. Do not use the oven to cure paint or any other solvent borne products.
3. Do not use the oven for powder coat.
4. Use in a well ventilated area.
5. Wear protective clothing and protect thyself from burns.
6. Do not unplug the unit till it has fully cooled down.
7. Do not EVER put magnesium in the oven.
8. Do not exceed 2200°F.
9. Do not block any vents.
10. Keep the fan exhaust at least 3 inches from any wall or obstruction.
11. In the event the oven overheats, the oven will automatically shut down. Please contact our office at 262-361-4912 to work with our team on resetting your oven if shut down occurs.
12. Use caution when loading and unloading kiln while kiln is in operation.
13. Do not leave kiln unattended.
14. The thermocouple works best if its not crowded against your work. Give it as much room as practically possible. Avoid blocking the thermocouple from the sides, particularly both sides at once.

### NOTE

Please note if your voltage falls below the recommended voltage you may experience controller issues and slower temperature speeds. Please ensure you plug your oven/kiln on its own circuit or confirm available power before running.



**WARNING:** This product can expose you to chemicals including chromium, which is know to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

SPECIFICATIONS	MODEL		
	HS-360C-120-15A	HS-360C-120-20A	HS-360C-240-20A
Max Temp	2200°F	2200°F	2200°F
Volts	120V	120V	240V
Max Amp Draw	15 amps	17 amps	9 amps
1-Phase Circuit	15 amps	20 amps	20 amps
Break In	4-5 hours	4-5 hours	4-5 hours
Length of Cord	3 feet	3 feet	3 feet
Weight	47 lbs.	47 lbs.	47 lbs.
Dimensions (External/Internal)	20" L x 18.5" W x 16" H 10" D x 6" W x 6" H	20" L x 18.5" W x 16" H 10" D x 6" W x 6" H	20" L x 18.5" W x 16" H 10" D x 6" W x 6" H
Warranty	12 months	12 months	12 months

## HOT SHOT ELECTRICAL FEATURES

- Available wifi with mobile app. \*Dependant on controller selected at checkout.
- Failsafe overtemp manual reset thermostat.
- 40 amp rated SSR with convection heat sink.
- Kiln type "K" thermocouple.
- Door limit switch.
- Easy to read slant top control panel.
- Heavy Duty cord with 20 amp plug or 15 amp plug.
- Fully grounded control and oven shell.

## HOT SHOT MECHANICAL FEATURES

- Dual layer air plenum for external heat management and precise temperature control.
- 20 Gauge core construction.
- Powder coated exterior shell.
- Two-inch Kaowool insulation in door.
- Kanthal A-1 heating element.



## STARTING YOUR OVEN FOR THE FIRST TIME?

Please carefully remove all packing material from the inside of your oven. Visually check that the element hasn't been bumped or moved during shipping.

- DO NOT block any vents.
- Keep the back of the oven (fan unit) at least 3 inches away from a wall or other objects.
- DO NOT attempt to duct the exhaust of the fan unless the exhaust has a power vent compatible with the cfm of the fan.

Your temperature controller has been pre-programmed to outgas your oven automatically and anneal your heating element. Place oven on a level, non-combustible surface.

**Important: Do these steps in a well ventilated area or outdoors if possible.**

**Note: The oven fan is regulated by the oven core temperature, therefore, it will not turn on immediately.**

- Run and heat soak for ½ hour @ 400°F - slight odor of burned anchor lube and assembly lubricants, small amount of smoke, kaowool board will turn chocolate brown and start outgassing.
- Run and heat soak for 45 minutes @ 800°F - odor from the insulating board will really begin to stink, you will wonder if this is actually normal, don't worry, it is. If you open the oven door, expect to see a fire show of outgassing contaminants & heavy smoke.
- Run and soak for 1 hour @ 1200°F.
- Run and soak for 1 hour @ 1600°F - the smell is still very strong, the inner insulating board of the oven is starting to cleanse itself and is turning white, there will be a brown ring around the door that will move away from the inner shell as temperature increases.
- Run and soak for 1 hour @ 1800°F - all downhill from here, you have burned off most of the impurities from the insulating board. Inner oven should be chalk white. The brown ring around the door should be fading.

2nd and 3rd firings: slight odor will be present, decreasing with each subsequent firing.

While it's not necessary to run your oven all the way up to the max temperature for the outgassing process, holding at 1500°F for 1 hour will remove 90% of the contaminants from the insulation. You will see steam escaping from the seams and even water forming at the feet of the oven from trapped moisture being burned away from the inner (hot) layer and condensing when it gets to the outer (cooler) layer.

**Note: When the power switch is turned on, the screen will flash and go blank for 20-30 seconds as the controller begins to run through a complex initialization period in which it configures all the inputs, outputs, and the underlying file system. This is normal.**