

DryRod[®] Ovens

Operating Instructions

Type 300HT Series Electrode Stabilization Ovens

- High temperature oven
- Adjustable thermostatic control
- Circular oven chamber promotes airflow and consistent heating



| Part No. | Description | Temperature Range* | Insulation | Chamber Size | Capacity (for 18" electrodes) | Weight | Dimensions |
|--|---|---|------------------|----------------------------|--|------------------|--|
| Type 300HT Series Ovens with 10" grounded heavy duty cord (no plug) | | | | | | | |
| 1200161 | 120/240V AC at 1500 watts with door mounted thermometer installed | 120° - 660°F (50° - 350°C) +/-25°F (14°C) adjustable thermostat control with indicator light | 2" fiberglass | 18" diameter x 19" deep | 400 lb (181.4 kg) Accepts 10", 12", and 14" electrodes | 90 lb (41 kg) | 29.5" x 22.5" x 22.5" (74.9 x 57.2 x 57.2 cm) |

* Operation on Direct Current (DC) will damage oven and void warranty. Average stabilized temperature at 70°F ambient temperature.

Product Description

! CAUTION

- To provide continued protection against risk of electrical shock, power cord must be connected to a properly grounded outlet.
- To avoid damage, never place oven in contact with welding current.
- Store in dry location. Unit not to be exposed to rain or moisture.

Wiring

Check type and voltage on nameplate.

Type 300HT (120/240V AC only) single phase shipped at 1/240V wiring

Note: Type 300HT Series ovens are wired at the factory for 240 volts. For 120 volt use, add heating element jumper connection. Rewire heating element connections per the 120 volt wiring diagram. Provide a plug cap of the corresponding voltage rating for connection to the power supply. Refer to wiring diagrams.

Grounding

The 300HT Series ovens have a 10 foot power supply cord. For 120 volt use, attach a 15 Amp 120 volt plug to the cord. Rewire according to 120 volt wiring diagram.

Amp Draw

Ovens operating on 120 AC voltage draw 12.5 amps. Those operating on 240 AC voltage draw 6.3 amps.

Accessory Note

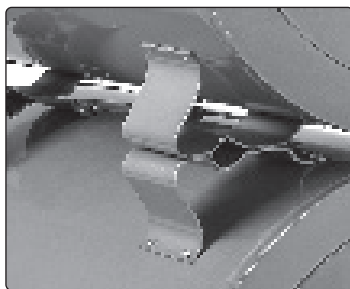
A Door Mounted Thermometer (part #1250300) is available for Type 300HT Series ovens and can be easily installed in the field. Factory installation is available with original order (see chart on cover). This thermometer indicates internal temperature range of 100° to 700°F with an accuracy specification of +/-10°. Product accuracy testing is conducted using standards traceable to the N.I.S.T., USA.



Door mounted thermometer

Accessory Note

Stacking provision for Type 300HT ovens is available with original order. Stacking permits two Type 300HT ovens to occupy the same floor space as one. For each stack, only ONE oven needs to be ordered with the stacking lugs. Stacking lugs (factory installed only) on lower oven bolt to feet of any Type 300HT oven, whether in the field or newly ordered.



Stacking lugs

Electrode Placement

DryRod ovens have divided shelves to allow storage of more than one group of electrodes. It is recommended to store different electrodes in separate ovens to avoid contamination. Spread the electrodes evenly, allowing space over each shelf for air circulation required to remove excess moisture. The maximum suggested layer depth on any shelf is 5 inches.

Temperature Settings

Type 300HT Series oven temperature range is 120°F (50°C) to 660°F (350°C). The thermostat dial (at rear of oven) is calibrated at 120°F (50°C) to 660°F (350°C).

Required oven temperature setting is obtained by rotation of thermostat dial to line up desired temperature with indicator light in the thermostat housing.

The indicator light illuminates only when voltage is being applied to the heating elements. Momentary rotation past desired temperature setting may be necessary to activate the indicator light in order to locate it for indexing purposes.

Thermostat is accurate to +/-25°F (14°C) at the sensing bulb; however, temperature may vary slightly at different areas in the oven chamber as this is a convection type oven. For applications requiring higher temperature, an electrode rebaking oven is required. (We suggest Phoenix Type 40HT High Temperature Oven.)

At the maximum setting, the actual temperature in portions of the oven near the heating elements may reach approximately 700°F (371°C).

Temperatures over 660°F (350°C) are not recommended. They may cause oven damage and/or unacceptably high exterior surface temperatures.

Venting

Before placing the oven into service, run the oven at 550°F (255°C) for two hours with vent hole fully open. This will help to purge the oven of any contaminants. (Smoke exiting from vent hole is common during burn-off of contaminants.)

For normal holding operation, set easily adjustable vent on the door about ¼ of the way open. For replacement vents, see Replacement Parts section in this manual.

Guide to Storage

Electrodes should be stored according to electrode supplier recommendations. In the absence of storage information from your electrode manufacturer, please reference Phoenix's Guide To Electrode and Flux Stabilization for approximate temperatures, found at www.dryrod.com/guide.

Troubleshooting

! CAUTION

- When replacing heating elements, always replace both elements. Pairing of one new element with an old element will cause rapid failure of old element.

Oven Fails To Operate: No Heat, Overheats

- If the indicator light does not illuminate, check power supply.
- Check plug at outer end of power cord and run continuity check on complete power cord. If defective, replace cord assembly.
- Check indicator light for continuity. See Repair Parts drawing for access details. If defective, replace indicator light.
- Check thermostat. If indicator light illuminates, power is being supplied through thermostat to heating elements. Turn knob from low to high setting and return. A definite "snap" should be heard at low temperature end and indicator light should turn off and on with each "snap" cycle. If "snap" is not heard and indicator light fails to operate, replace entire thermostat.
- If thermostat operates satisfactorily, check continuity of dual hairpin style heating elements at bottom center of oven. Failure of one element will prevent oven operation on 480 volts. If operating on 120 or 240 volts failure of one element will cause very slow heating.
- If thermostat operates satisfactorily, recalibrate thermostat. (See Checking Thermostat Calibration section below).

Door Will Not Close Properly

- Use screwdriver to adjust door latch.
- If latch is broken, replace with Door Latch and Strike (part #1252200). (See Replacement Parts section in this manual.)

Checking Thermostat Calibration

Each thermostat is adjusted at the factory and calibrated on precision instruments to control temperatures accurately. Adjustment or re-calibration is not needed unless the thermostat has been mishandled in transit or changed or abused while in service.

To check calibration:

- Use a high grade mercury thermometer to check temperature. For griddle control, use a disc type thermocouple. Put a couple drops of oil on griddle surface plate, and place thermocouple disc flat into the oil.
- Turn the dial of the thermostat to 325° mark.
- Allow enough time for temperature to stabilize or until several temperature readings are identical.

To calibrate:

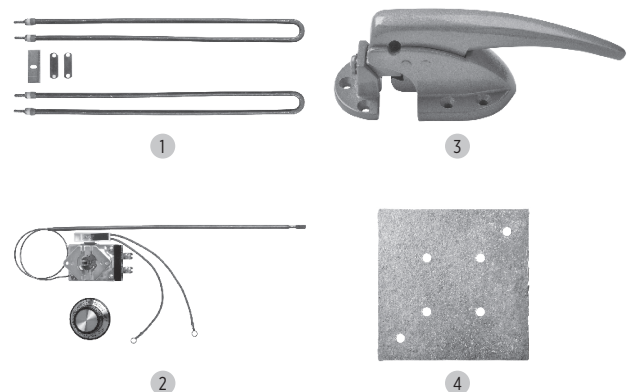
- Remove knob from dial shaft by pulling knob straight out.
- With screwdriver, turn screw clockwise to decrease and counterclockwise to increase temperature. Do not allow dial shaft to turn during this operation. A ¼ turn of the screw equals approximately 35°.
- Replace knob or control dial.
- After calibrating, let the appliance operate until the temperature has stabilized, then recheck to determine if the calibration has been successful.

Recommended Spare Parts

For users of large DryRod oven quantities or users not in North America:

For normal daily operation, the following spare parts and quantities are recommended to have inventoried.

| Item No. | Spare Part Description | Part No. | Recommended Quantity per 10 Ovens |
|----------|------------------------|----------|-----------------------------------|
| 1 | Heating Element Kit | 1250800 | 1 |
| 2 | Thermostat Kit | 1251400 | 1 |
| 3 | Door Latch and Strike | 1252200 | 1 |
| 4 | Insulation Block | 1252401 | 1 |



Replacement Parts

Ordering Information

To order spare or replacement parts, visit our website: www.dryrod.com. When ordering, please confirm that you are ordering parts for the correct oven.

| Item No. | Description | Qty | Part No. |
|----------|--|-----|----------|
| 1 | Thermostat Housing | 1 | 1250810 |
| 2 | Door Latch and Strike | 1 | 1252200 |
| 3 | Door Mounted Thermometer Kit | | 1250300 |
| | Door Mounted Thermometer | 1 | |
| | Mounting Bracket | 1 | |
| | Cover | 1 | |
| 4 | Heating Element Kit | | 1250800 |
| | Element | 2 | |
| | Jumper | 2 | |
| | Retainer | 1 | |
| 5 | Thermostat Kit | | 1251400 |
| | Thermostat | 1 | |
| | Thermostat Knob | 1 | |
| 6 | Insulation Block | 1 | 1252401 |
| 7 | Vent Cover Kit (includes two vent covers) | 1 | 1257152 |
| 8 | Shelf Assembly Kit | | 1255100 |
| | Shelf Assembly | 1 | |
| | Angle Clip | 1 | |
| | Cord Kit | | 1257121 |
| | Connection Cord | 1 | |
| | Cord Grips (7W-2) | 1 | |
| | Lead Kit | | 1257127 |
| | Lead | 2 | |
| | Conduit Kit | | 1257151 |
| | Conduit Box | 1 | |
| | Conduit Box Cover | 1 | |
| | Conduit (½") | 1 | |
| | Conduit Connectors (½") | 2 | |

Replacement Parts



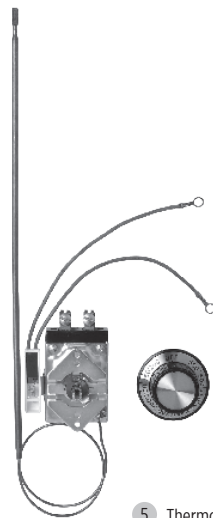
1 Thermostat Housing

2 Door Latch and Strike

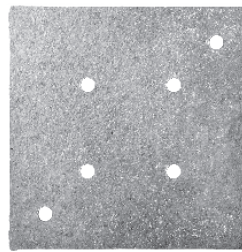


3 Door Mounted Thermometer Kit

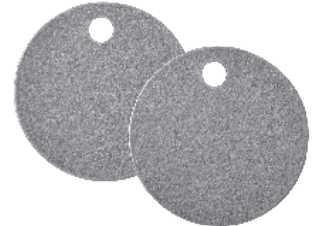
4 Heating Element Kit



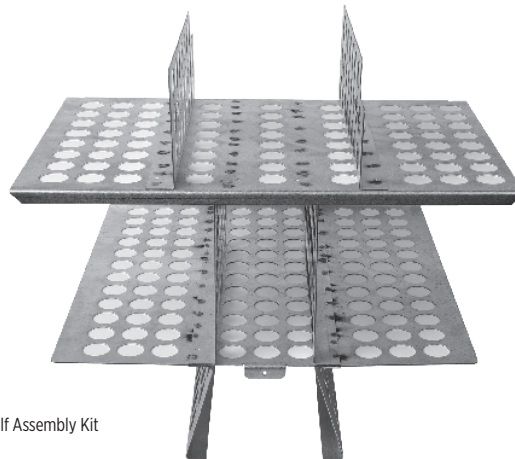
5 Thermostat Kit



6 Insulation Block



7 Vent Cover Kit



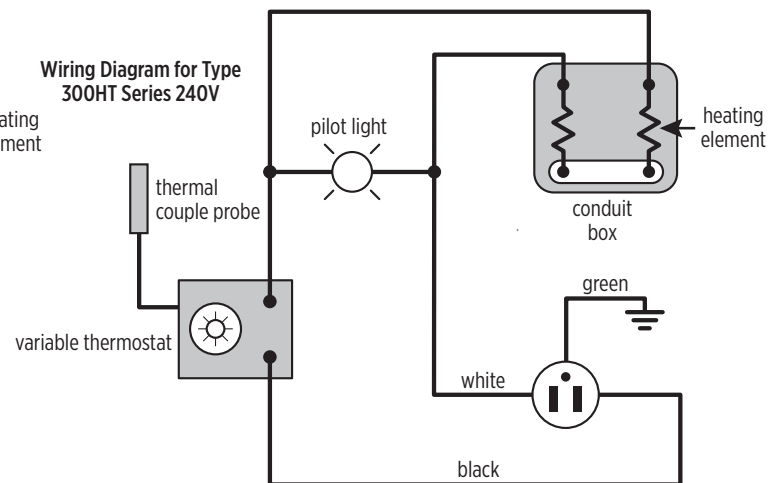
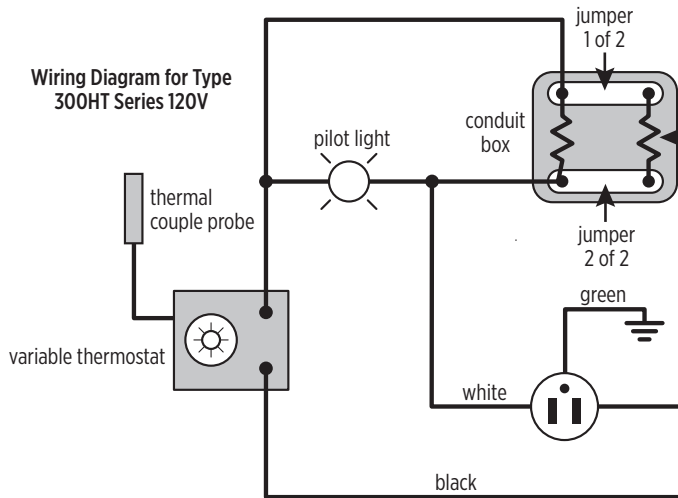
8 Shelf Assembly Kit

Wiring

CAUTION

- All wiring should be done by a licensed electrician in accordance with state codes, local codes, and National Electrical Code (NEC) or International Electric Commission (IEC) standards.
- Improper installation or use may result in serious injury.
- Always remove oven from power source before troubleshooting or repairing.

Note: Jumper wires must be installed outside of insulation.
Thermometer probe wire (not shown) must be installed outside of insulation.



Guide to Electrode & Flux Stabilization

Eliminate expensive rework and protect welding profits!

This guide explains proper storage and oven holding temperatures:

- Recondition/rebake procedures for electrode coatings exposed to moisture are included.
- Remove electrodes from cardboard containers before placing in ovens.
- Electrode coatings should not be exposed to the re-baking temperature without first being reconditioned at a lower temperature. Failure to do so may result in breakdown of electrode coatings. After re-baking, lower temperature to holding level until reissued.

Download your guide at www.dryrod.com/guide.

Warranty

Phoenix Ovens International LLC warrants its products against defects in material and workmanship. The company will, at its discretion, repair or replace any properly installed Phoenix International manufactured product which fails under normal operating conditions within one year from date of receipt. Contact the factory for return authorization before returning the product to Phoenix International freight prepaid. If our inspection confirms that the product is defective under terms of this warranty, it will be repaired/replaced and returned freight prepaid.

This warranty applies only to products sold by Phoenix International, Inc. and specifically excludes installation or de-installation labor, transportation or equipment of another manufacturer used in conjunction with Phoenix International products. No other warranty, expressed or implied, exists beyond this warranty declaration.

Phoenix constantly strives to improve its products and therefore reserves the right to change design, materials and specifications without notice.