

DryRod[®] Ovens

Operating Instructions

Type 300 Series Electrode Stabilization Ovens

- Bench models provide large capacity storage for electrodes
- Door mounted thermometer offered for instant temperature indication
- Adjustable thermostatic control
- Single action door latch easily closes and can be locked
- Shelving provides fit for 50 lb cans

Compliances:  



Part No.	Description	Options	Temperature Range*	Insulation	Chamber Size	Capacity (for 18" electrodes)	Weight	Dimensions
Type 300 Series Ovens with 10" grounded heavy duty cord**								
1200200	120/240V AC at 1000 watts	none	100° - 550°F (38° - 288°C) +/- 25°F (14°C) adjustable thermostat control with indicator light	2" fiberglass	18" diameter x 19" deep	400 lb (182 kg) accepts electrodes up to 18"	90 lb (41 kg)	29.5" x 22.5" x 22.5"
1200100	240/480V AC at 1000 watts							
1200201	120/240V AC at 1000 watts	with door mounted thermometer installed						
1200101	240/480V AC at 1000 watts							
1200202	120/240V AC at 1000 watts	with top stacking lugs installed						
1200102	240/480V AC at 1000 watts							
1200203	120/240V AC at 1000 watts	with door mounted thermometer and top stacking lugs installed						
1200103	240/480V AC at 1000 watts							

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

** 240/480V models with 10" grounded heavy duty cord does not included plug

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 300 (120/240V AC only) single phase

Type 300 (240/480V AC only) single phase

Note: 120/240 volt models are wired at the factory for 120 volts. For 240 volt use, change heating element jumper connections. Refer to wiring diagrams.

240/480 volt models are wired at the factory for 240 volts. For 480 volt use, change heating element jumper connections. Provide a plug of the corresponding voltage rating for connection to the power supply. Refer to wiring diagrams.

Grounding

The 120/240 volt ovens have a three blade plug with grounding prong (NEMA 5-15P) attached to a 10 foot power supply cord. When used with a grounded receptacle, these ovens meet all local electrical code requirements and are ETL listed.

The 240/480 volt ovens have a 10 foot power supply cord. When used with a grounding plug and a grounded receptacle, these ovens meet all local code requirements and are ETL listed.

Amp Draw

Ovens operating on 120 AC voltage draw 8.3 amps. Those operating on 240 AC voltage draw 4 amps. Those operating on 480 AC voltage draw 2 amps.

Accessory Note

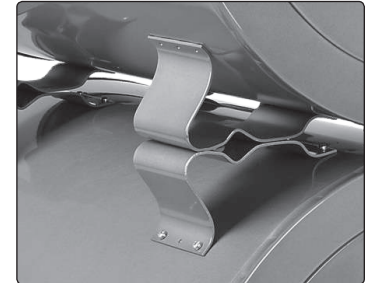
A Door Mounted Thermometer (part #1250300) is available for Type 300 Series ovens and can be easily installed in the field. Factory installation is available with original order (see chart on cover). This thermometer indicates internal temperature range of 100° to 700° F with an accuracy specification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



Door mounted thermometer

Accessory Note

Stacking provision for Type 300 ovens is available with original order. Stacking permits two Type 300 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 300 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

Temperature range is 100°F (38°C) to 550°F (288°C). The thermostat dial (at rear of oven) is calibrated from 100° to 550°F. Obtain required oven temperature setting by rotating 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 $\pm 25^\circ\text{F}$ (14°C) at the sensing bulb; however, temperature may vary slightly at different areas in the oven chamber because this is a convection type oven.

At the maximum setting, the actual temperature in portions of the oven near the heating elements may reach approximately 660°F (349°C).

Temperatures over 550°F (288°C) are not recommended. They may cause oven damage and/or unacceptably high exterior surface temperatures.

Venting

For normal holding operation, set easily adjustable vent on the door about $\frac{1}{4}$ 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

1. If the indicator light does not illuminate, check power supply.
2. Check plug at outer end of power cord and run continuity check on complete power cord. If defective, replace cord assembly.
3. Check indicator light for continuity. See Repair Parts drawing for access details. If defective, replace indicator light.
4. 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.
5. 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.
6. If thermostat operates satisfactorily, recalibrate thermostat. (See Checking Thermostat Calibration section below).

Door Will Not Close Properly

1. Use screwdriver to adjust door latch.
2. 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:

1. 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.
2. Turn the dial of the thermostat to 325° mark.
3. Allow enough time for temperature to stabilize or until several temperature readings are identical.

To calibrate:

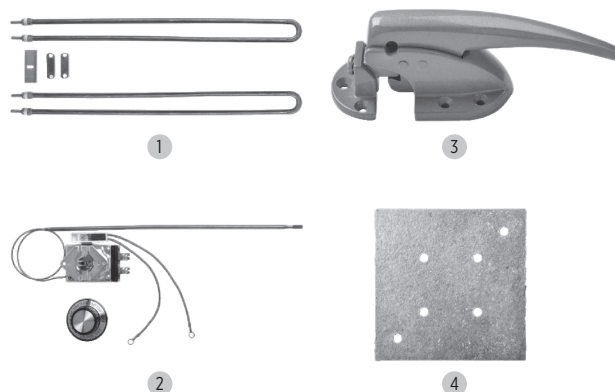
1. Remove knob from dial shaft by pulling knob straight out.
2. With screwdriver, turn screw clockwise to decrease and counterclockwise to increase temperature. Do not allow dial shaft to turn during this operation. A ¼ turn of the screw equals approximately 35°.
3. Replace knob or control dial.
4. After 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. for 120/240V	Part No. for 240/480V	Recommended Quantity per 10 Ovens
1	Heating Element Kit	1250500	1250600	1
2	Thermostat Kit	1251100	1251200	1
3	Cord Kit	1257120	1257121	1
4	Insulation Block	1252400	1252400	1
5	Door Latch and Strike	1252200	1252200	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. 120/240V	Part No. 240/480V
1	Thermostat Housing	1	2200200	2200200
2	Door Latch and Strike	1	1252200	1252200
3	Door Mounted Thermometer Kit		1250300	1250300
	Door Mounted Thermometer	1		
	Mounting Bracket	1		
	Cover	1		
4	Heating Element Kit		1250500	1250600
	Element	2		
	Jumper	2		
	Retainer	1		
5	Thermostat Kit		1251100	1251200
	Thermostat	1		
	Thermostat Knob	1		
6	Insulation Block	1	1252400	1252400
7	Vent Cover Kit (includes two vent covers)	1	1257152	1257152
8	Shelf Assembly Kit		1255100	1255100
	Shelf Assembly	1		
	Cord Kit		1257120	1257121
	Connection Cord	1		
	Cord Grips (7W-2)	1		
	Lead Kit		1257123	1257123
	Lead	2		
	Conduit Kit		1257151	1257151
	Conduit Box	1		
	Conduit Box Cover	1		
	Conduit (½")	1		
	Conduit Connectors (½")	2		

Replacement Parts



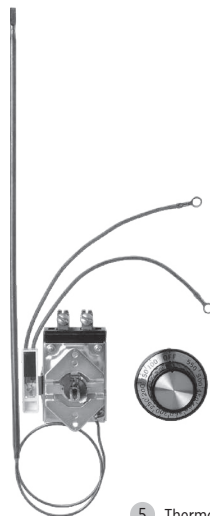
1 Thermostat Housing

2 Door Latch and Strike

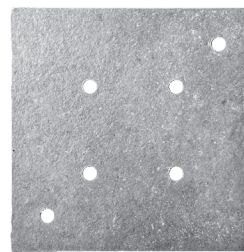


3 Door Mounted Thermometer Kit

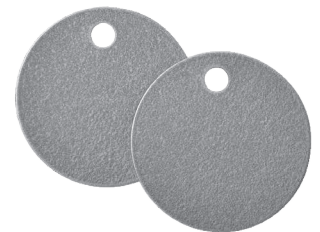
4 Heating Element Kit



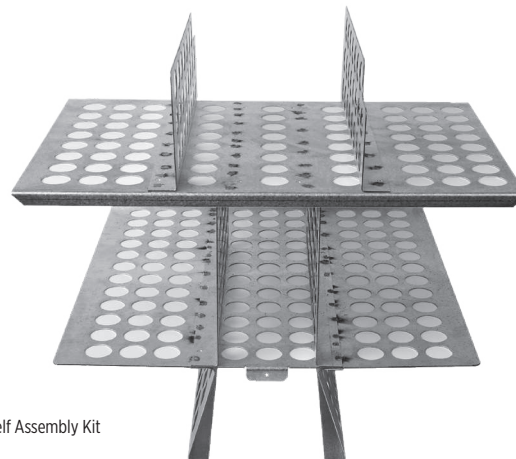
5 Thermostat Kit



6 Insulation Block



7 Vent Cover Kit



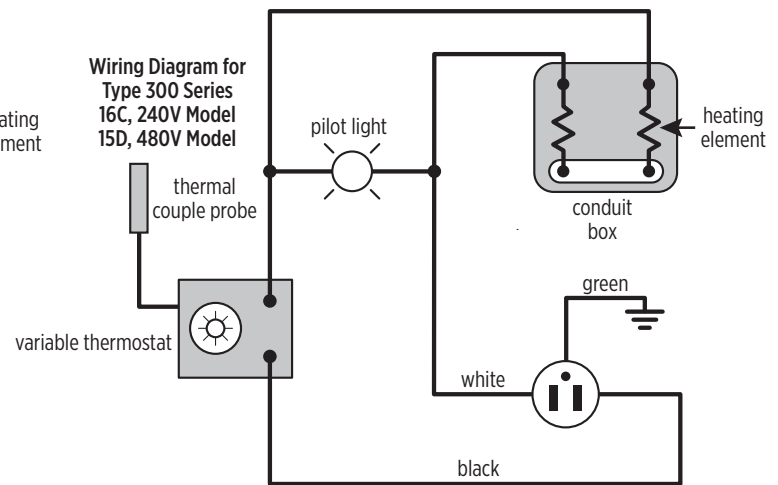
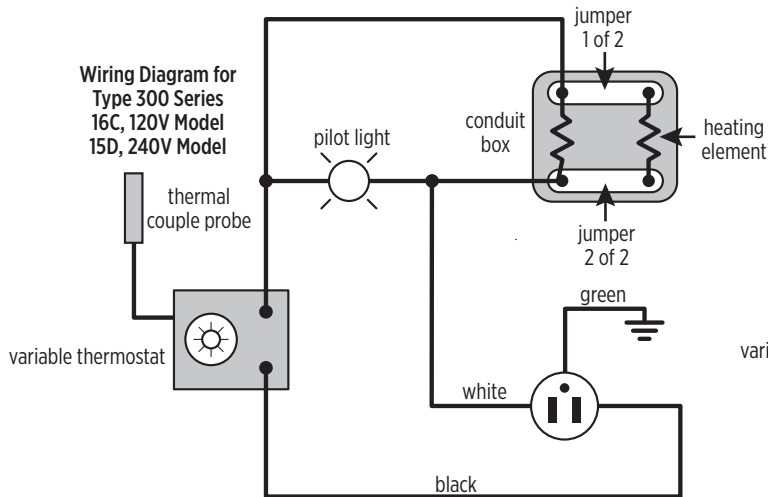
8 Shelf Assembly Kit

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.