

Electrode Stabilizing

DryRod® Ovens

I. OPERATING INSTRUCTIONS FOR TYPE 300 120/240 VOLT HIGH TEMPERATURE SERIES

Type	Part #	Description - (All 50-60 cycles)	Temp. Range**	Insulation	Chamber Size	Capacity
300 High Temp	1200160	120-240V AC* @ 1500 watts w/ 10' Grounded HD cord	38° to 350°C (122°- 660°F) +/- 12°C (22°F) Adjustable Thermostat Control with Indicator Light	5cm (2") Glass Fiber Batt	46cm dia. x 48cm deep (18" dia. x 19" deep)	159 kg (350 lb) of 45.7cm (18") electrodes also accepts 35.4cm (10"), 30.5cm (12"), & 36cm (14")

*Operation on Direct Current will damage oven and void warranty

**Average Stabilized Temperature @ 22°C Ambient



Accessory Note

Model ST - 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. Stacking lugs (factory installed only) on lower oven bolt to feet of any Type 300 oven, whether in the field or newly ordered.

Contact factory to order stacking version.

Accessory Note

A door mounting Thermometer Kit is available for use with all Type 300, 900 and dryWIRE® ovens, new or old. Easily installed in the field (Order Part # 1250300). Factory installation available with original order (Order Part # 1250301). This thermometer indicates internal temperature range of 38° to 372°C (100° - 700° F). The thermometer accuracy specification is +/- 6°C (11°F). Product accuracy testing is conducted using Bimetallic Actuated Thermometer Standard ASME B40.3



****CAUTION****

When using for the first time, run oven at 288°C (550°F) for two hours with vent hole fully open to burn off contaminates.

II. OVEN TYPE DESCRIPTION

Wiring

Check type and voltage on nameplate.

1. Type 300, High Temperature Model (120 or 240 volt AC only) single phase.

*Note: Type 300 High Temperature Model is wired at the factory for 240 volts. For 120 volt use, add heating element jumper connection (included in operating manual packet). Rewire heating element connections per the 120 Volt wiring schematic. Provide a plug cap of the corresponding voltage rating for connection to the power supply.

Grounding

1. The 120/240 volt 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 schematic.

Electrode Placement

Your DryRod® oven has removable divided shelves to allow storage of more than one group of electrodes. Avoid treating EXX10 or EXX11 types at the same time with EXX15, EXX16 and EXX18 electrodes as their holding temperatures vary widely. Spread the electrodes evenly, allowing space over each shelf for air circulation required to remove excess moisture. 5" is the maximum suggested layer depth on any shelf.

Guide to Storage

In the absence of detailed storage information from your electrode manufacturer, the "Revised Guide To Electrode Storage" (available from Phoenix International, Inc.) may be used as an indication of approximate temperatures. For Specific information involving critical operations be sure to contact your electrode manufacturer for complete information.

Venting

Before placing the oven into service, run the oven at 288°C (550°F) for two hours with vent hole fully open. This will help to purge the oven of any contaminates.

Warning: Smoke exiting from vent hole is common during burn-off of contaminates.

For normal holding operation set easily adjusted vent on the door about ¼ open.

Temperature Setting

Temperature range is 50°C (122°F) to 350°C (660°F). The Thermostat Dial (at rear of oven) is calibrated from 50°C to 350°C (122° to 660°F.) Required oven temperature setting is obtained by rotation of dial to line up desired temperature with indicator light in the thermostat housing.

The indicator light operates only when voltage is 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 $\pm 12^{\circ}\text{C}$ (22°F) at the sensing bulb, however, temperature may vary slightly at different areas in the oven chamber since this is a convection type oven. For more uniform and accurate temperature control, a re-circulating power blower type of oven is required. (We suggest Phoenix Type 400BT High Temperature Oven).

Warning

Excess Heat: At the maximum setting, the actual temperature in portions of the oven near the heating elements may reach approximately 404°C (760°F).

Repair - Spare Parts

Enclosed with these instructions are wiring diagrams and a repair parts list for your oven. For critical welding operations requiring continuous holding we would suggest carrying all of the parts listed in the "Suggested Spare Parts Section" of these instructions.

****CAUTION****

All wiring should be done by licensed electricians in accordance with local codes. Improper installation or use may result in serious injury. Always remove oven from power source before troubleshooting or repairing.

III. TROUBLESHOOTING - TYPE 300 OVENS

OVEN FAILS TO OPERATE - NO HEAT

1. If oven indicator light will 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 at rear of oven. If indicator light illuminates, power is being supplied through thermostat to dual heating elements. Turn knob from low to high setting and return. 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. (See Repair Parts Sheet and "Suggested Spare Parts").
5. If thermostat operates satisfactorily, check continuity of dual hairpin style heating elements at bottom center of oven. (see Repair Parts drawing for access details.) When operating on 120 or 240 volts failure of one element will cause very slow heating. Remove oven from power source. Replace BOTH ele-

ments. Pairing of one new element with an old element may cause rapid failure of old element.

OVEN OPERATES - OVERHEATS

Check thermostat operation as in number 3 (Oven Fails To Operate - No Heat) and number 2 (Oven Operates - Temperatures Setting Off).

OVEN OPERATES - TEMPERATURE SETTING "OFF"

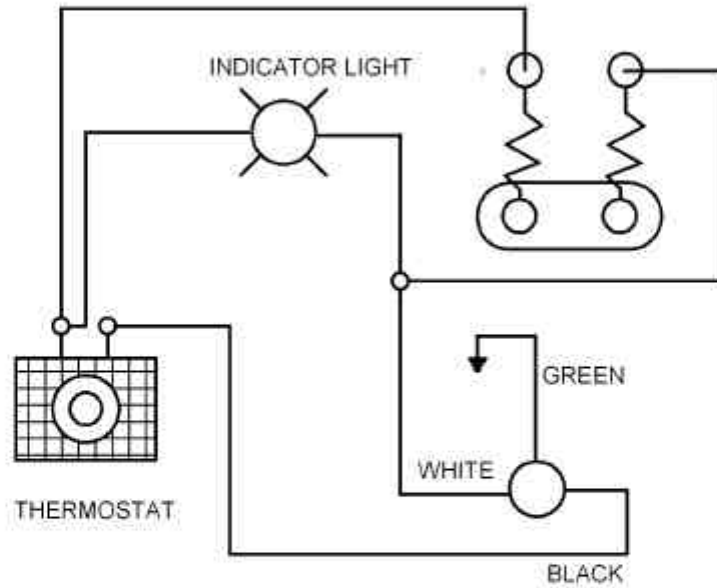
1. Check thermostat operation as in number 3 (Oven Fails To Operate - No Heat) and number 2 (Oven Operates - Temperature Setting Off)
2. If thermostat operates satisfactorily, recalibrate per thermostat calibration adjusting sheet.

DOOR WILL NOT CLOSE PROPERLY

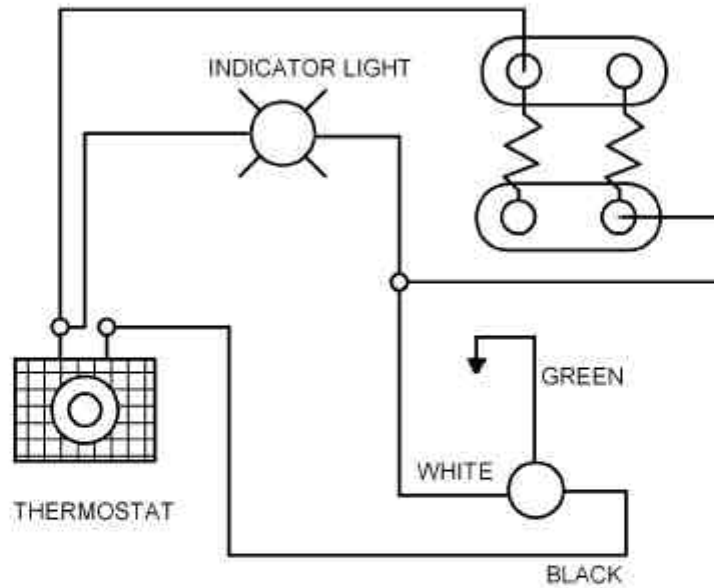
1. Use screwdriver to adjust door latch (No.2 on Repair Parts drawing - front view).
2. If latch is broken, replace. Order spare Part No. 1252200, door latch and strike.

TYPE 300 WIRING DIAGRAM

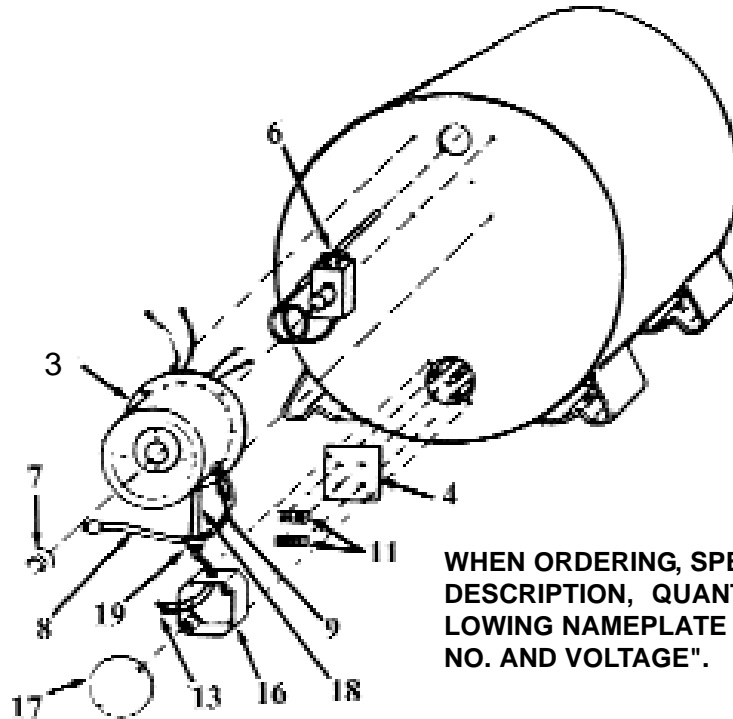
240 VOLT WIRING DIAGRAM



120 VOLT WIRING DIAGRAM



IV. TYPE 300 REPAIR PARTS ILLUSTRATION

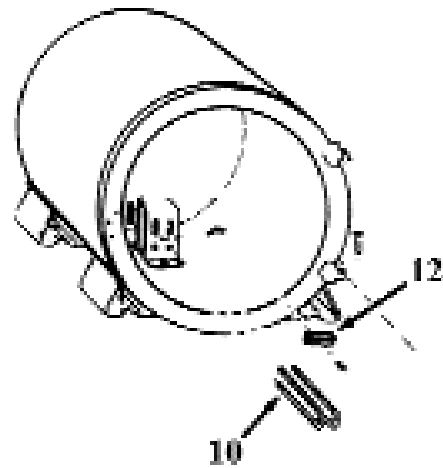
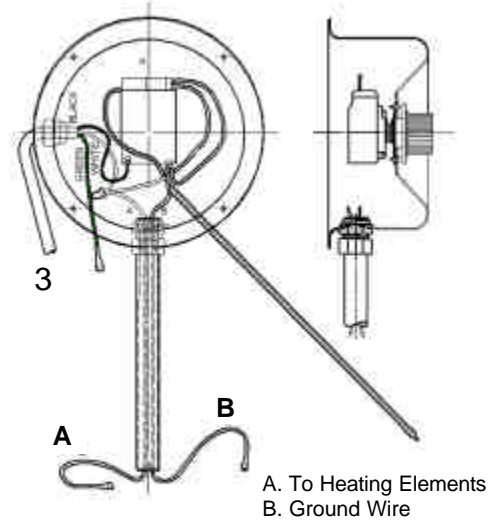
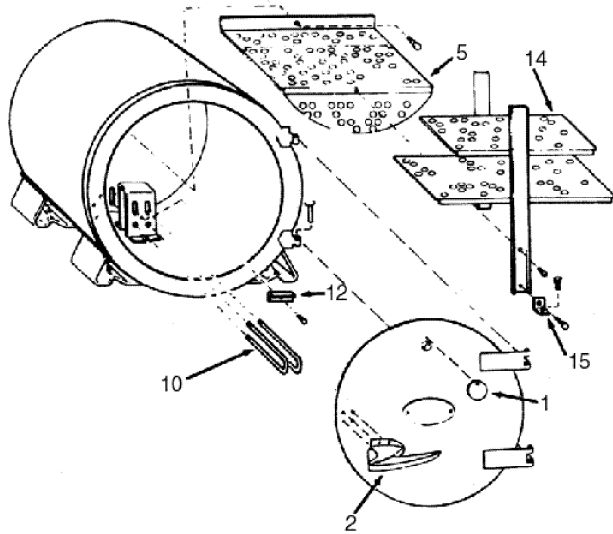


WHEN ORDERING, SPECIFY PART NUMBER, DESCRIPTION, QUANTITY AND THE FOLLOWING NAMEPLATE DATA: "TYPE, MODEL NO. AND VOLTAGE".

Item No.	Description	Qty/ Oven	Part Numbers
			120-240V AC Only
1	Vent Cover Kit includes two vent covers	1	1257152
2	Door Latch & Strike	1	1255200
3	Thermostat Housing	1	1250810
4	Insulation Block	1	1252401
5	Lower Shelf Assembly	1	1255200
Thermostat Kit includes			
6	Thermostat	1	1251400
7	Thermostat knob	1	
Cord Kit Includes			
8	Connection Cord	1	1257126
9	Cord Grip (7W-2)	1	
Heating Element Kit Includes			
10	Element	2	1250800
11	Jumper	2	
12	Retainer	1	
Lead Kit includes material to make:			
13	Lead	2	1257127
Shelf Assembly Kit includes			
14	Shelf Assembly	1	1255100
15	Angle Clip	1	
Conduit Kit includes			
16	Conduit Box	1	1257151
17	Conduit Box Cover	1	
18	Conduit 1/2" size	1	
19	Conduit Connectors 1/2" size	2	
not shown	Door Mounting Thermometer Kit (reads in °F & °C)	1	1250300

When Ordering - Specify part number, description, quantity and plate number

TYPE 300 REPAIR PARTS ILLUSTRATION (Continued)



Note

Always replace BOTH heating elements if one fails. (Two are required for each oven.) Replacement elements are sold in sets of (2) each only.

V. SUGGESTED SPARE PARTS TYPE 300 OVENS

Following quantities for each oven:*

- One (1) kit of (2) heating elements No. 1250800
 - One (1) thermostat, kit No. 1251400
 - One (1) door latch and strike No. 1252200
 - One (1) insulation block No. 1252401
- One (1) 10 foot connection cord without plug cap, No.1257126

*For quantities of ovens exceeding 10, we suggest providing approximately 20% more of the above quantities of spares as sufficient for day to day operation.

For overseas operation we suggest a minimum of 30% more for spares.

Phoenix International, Inc. 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.

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