

Type 2 Series Portable Electrode Stabilization Ovens



PART #	DESCRIPTION (All 50-60 Cycles)	TEMP RANGE**	INSULATION	CHAMBER SIZE	CAPACITY	WEIGHT & DIMENSIONS
Type 2 Series Ovens						
1205512	100-240V AC/DC @ 70 watts* with North American power cord	100° to 300°F (38° to 149°C) +/-25°F (14°C) Adjustable thermostat	1½" fiberglass	4" diameter x 20" deep	20 lb (10 kg) of 18" electrodes	15¼ lb 7¾" x 9¼" x 23"
1215512	100-240V AC/DC @ 70 watts* with European/Schuko power cord					
1225512	100-240V AC/DC @ 70 watts* with U.K. power cord					
1205510	100-240V AC/DC @ 70 watts* with digital thermometer and North American power cord					
1215510	100-240V AC/DC @ 70 watts* with digital thermometer and European/Schuko power cord					
1225510	100-240V AC/DC @ 70 watts* with digital thermometer and U.K. power cord					

*Average stabilized wattage. Draw will increase during initial heating.

**Average stabilized temperature @ 70°F ambient temperature.

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OVEN DESCRIPTION

PRIOR TO USE

1. Check for correct power supply cord and plug.
2. Verify the oven is empty before heating.
3. Check nameplate for voltage ratings.
4. Check for desired thermometer (if equipped) display units (°F or °C). Unit is set to °F when shipped. To change to °C, see *Temperature Indication* section in this manual.

POWER SUPPLY

DryRod II Ovens are designed to run on either AC or DC voltage and accept voltage between 100-240 volts. When power is supplied, the indicator light will illuminate.

AMP DRAW

120V = .6 amps
240V = .3 amps

POWER CORDS

DryRod II Ovens are supplied with a female IEC 320 locking power inlet. This inlet accepts a male IEC 320 locking power cord to provide a fixed connection. The secured cord can be removed for replacement by applying pressure to the yellow tab on top of the locking power cord.



DryRod II Oven power cords are rated for 100-240 volts. When connected to a properly grounded receptacle, these ovens meet the nationally recognized standards for which they are marked.

DryRod II Ovens are available with a three blade, North American power cord for 120 volt AC operation. The ovens are also available with a European/Schuko plug configuration for operation on 240 volt AC. (See *Replacement Parts* section in this manual for optional power cords. See front page for standard oven configuration with power cord options.)



ELECTRODE STORAGE

DryRod II Ovens are not airtight and electrodes stored within will start absorbing ambient moisture as soon as the oven cools. We recommend removal of electrodes at shift end and storage in suitable larger holding ovens until re-issued.

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DryRod II Ovens are not to be used for re-baking or re-conditioning contaminated electrodes. They are designed to accept electrodes in 100% usable condition and to maintain that condition until consumed at the job site. For optimum stabilization, oven should be hot when loaded and kept powered for as long as electrodes are being stored.

GUIDE TO STORAGE

Electrodes should be stored according to electrode supplier recommendations. In the absence of detailed storage information from your electrode manufacturer, the *Guide To Electrode and Flux Stabilization* section in this manual may be used as an indication of approximate temperatures.

REPAIR: SPARE PARTS

These instructions contain wiring diagrams and a repair parts list for your DryRod II Oven. For critical welding operations requiring continuous holding, we would suggest carrying all the parts listed in the *Suggested Spare Parts* section in this manual.

Spare parts are available at www.phx-international.com or by contacting your local distributor.

TEMPERATURE SETTINGS

DryRod II Ovens utilize a variable thermostat, providing an operating range of 100°-300°F (38°-149°C) average stabilized load temperatures.

The oven operating temperature is set by rotating the thermostat knob clockwise to increase the temperature of the unit. To decrease the temperature rotate the knob counter-clockwise. This setting is approximate and may need slight adjustment once the oven temperature stabilizes.

TEMPERATURE INDICATION

DryRod II Ovens (Part #1205510) are supplied with a battery powered digital thermometer to indicate the actual temperature inside oven in either °F or °C.

The thermometers are supplied in °F mode. Conversion to °C mode is accomplished by pressing the button located in the battery holder. This will cycle between °F and °C. Thermometers are powered by one AA battery.

Replacement of the battery is also covered in the troubleshooting section of this manual.



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.

OVEN FAILS TO OPERATE: NO HEAT

1. If the indicator light does not illuminate, check power supply.
2. Confirm cord is plugged fully into power inlet. Check complete power cord for continuity. If defective, replace the entire cord.
3. Check indicator light. Using a volt meter, confirm voltage to the light leads. If voltage is confirmed and light does not illuminate, replace light. *Please note the indicator light is neon and cannot be checked for continuity.*
4. Disconnect wiring from the thermostat. Turn the thermostat knob to the lowest temperature setting (counter-clockwise). Check for continuity through thermostat. If no continuity, replace thermostat.
5. Open oven shell and base to expose all wiring. Confirm all connections to power inlet and heating element are secure. Reassemble oven and check if oven heats. If no heat, replace heating element.

OVEN OPERATES: OVERHEATS OR DOES NOT HEAT TO DESIRED TEMPERATURE

1. Check power supply to confirm voltage is within acceptable range of 100-240V AC.
2. Check that the variable thermostat is properly set to the desired temperature.
3. Check that enough time has been allowed for heat-up. A cold, fully loaded oven may take up to four hours to fully heat and stabilize.
4. Check that the variable thermostat is securely mounted to the oven chamber and completely covered in insulation. A loosely mounted thermostat will not properly sense the oven temperature.

THERMOMETER INDICATES IN WRONG UNITS: °F OR °C (IF EQUIPPED)

1. Disconnect power from the unit.
2. Remove the bottom cover from the base to expose thermometer battery housing.
3. Changing to either °F or °C is accomplished by pressing the button located in the battery holder.
4. Re-install the battery and bottom cover prior to putting the oven back in service.

THERMOMETER INOPERABLE (IF EQUIPPED): REPLACE BATTERY

Indicated by an incomplete or absent display.

1. Disconnect power from the unit.
2. Remove the bottom cover from the base.
3. Remove the battery from the holder and replace with a fresh AA 1.5V battery. (Alkaline batteries are recommended.)
4. Re-install the battery and bottom cover prior to putting the oven back in service.



CAUTION:

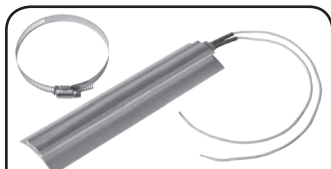
Disconnect power before opening or servicing unit. Make sure oven is cooled before opening or servicing unit.

Hot Surfaces! Use extreme care to avoid possible burns or personal injury. Protective gloves and personal protective equipment are recommended.

SUGGESTED SPARE PARTS

For normal daily operation, the following spare parts and quantities are recommended to have inventoried for every 10 units of DryRod II Ovens in use.

SUGGESTED SPARE PART	QUANTITY PER 10 OVENS	PART #
Dual Voltage Heating Element Kit	1	1257318
Variable Thermostat Kit	1	1257430
Locking Power Connection Kit	1	1257395
Indicator Light	1	1257400



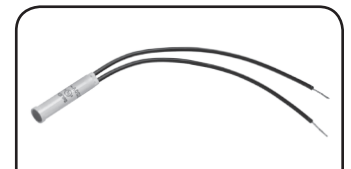
DUAL VOLTAGE HEATING ELEMENT KIT



VARIABLE THERMOSTAT KIT



LOCKING POWER CONNECTION KIT



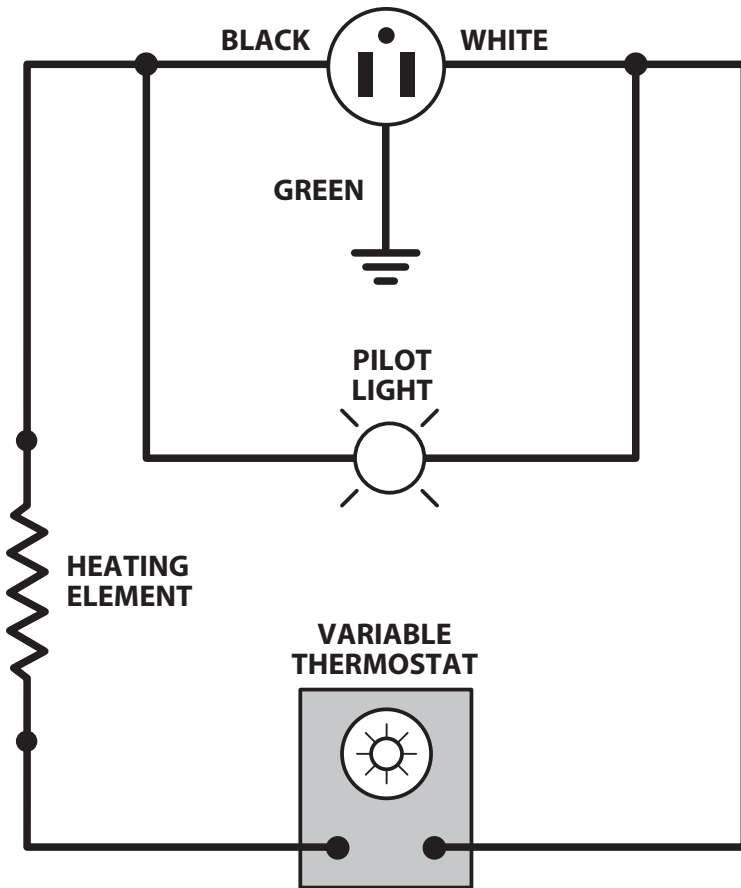
INDICATOR LIGHT



NOTE:

For users of large oven quantities, or users not in North America, we recommend keeping an inventory of additional spare parts to support day to day operation.

WIRING DIAGRAM



NOTE:

Jumper wires must be installed outside of insulation.

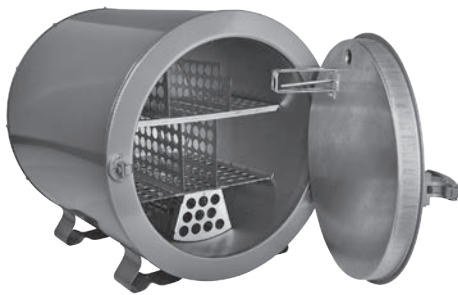
Thermometer probe wire (not shown) must be installed outside of insulation.



CAUTION:

All wiring should be done by licensed electricians in accordance with state and local codes, as well as the NEC (National Electrical Code) Standards. Improper installation or use may result in serious injury. Always remove oven from power source before troubleshooting or repairing.

ADDITIONAL PRODUCTS AVAILABLE



Type 300 Series
Stationary Electrode Oven



Type 15B Series
Stationary Electrode Oven



Safetube® Industrial
Storage Container

REPLACEMENT PARTS

#	DESCRIPTION	QTY	PART #
6	Rod Elevator	1	1257270
	Insulation	1	1257300
2	Indicator Light	1	1257400
7	North American Power Cord	1	1257540
9	European Schuko Power Cord	1	4131046
5 Dual Voltage Heating Element Kit			
	Heating Element	1	1257318
	Band Clamp	1	
3 Lid Assembly Kit			
	Screws	2	1257230
	Lid Assembly	1	
	Insulation	1	
10 Latch Kit			
	Latch	1	1257380
	Rivet	2	
8 Variable Thermostat Kit			
	Variable Thermostat	1	1257430
	Nut	1	
	Knob	1	
1 Thermometer Kit			
	Digital Thermometer	1	1257420
	Screw	2	
	Label	1	
	Clamp	1	
Jumper Wire Kit			
	Power Wires	8	1257531
	Ground Wire	1	
7 Power Inlet Kit			
	Rivet	2	1257390
	Locking Power Inlet	1	
7 North American Locking Power Connection Kit			
	Rivet	2	1257395
	Locking Power Inlet	1	
	120V North American Locking Cord	1	
4 Base Cover Kit			
	Base Cover	1	1257170
	Screws	2	



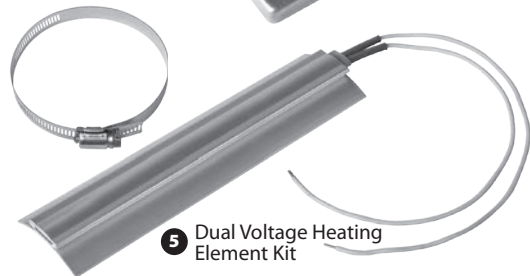
1 Thermometer Kit



2 Indicator Light



3 Lid Assembly Kit



5 Dual Voltage Heating Element Kit



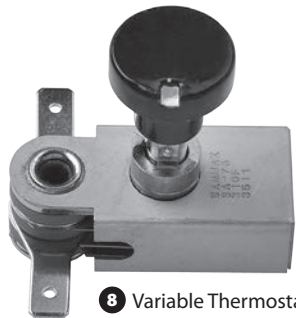
6 Rod Elevator



4 Base Cover Kit



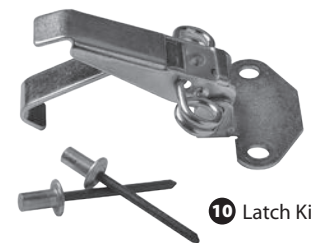
7 North American Locking Power Connection Kit



8 Variable Thermostat Kit



9 European/Schuko Power Cord



10 Latch Kit



ORDERING INFORMATION

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



GUIDE TO ELECTRODE & FLUX STABILIZATION

Eliminate expensive rework and protect welding profits!

- 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.

AWS (TYPE)	Air Conditioned Storage Before Opening (RH=Relative Humidity)	DryRod Oven Holding Temp After Opening	After Exposure to Moisture, Sufficient Amount of Time to Affect Weld Quality	
			Recondition Step #1	Rebake Step #2
<i>Cellulose</i> EXX10, EXX11, EXX20	70°–120°F (21°–49°C) 50% Max RH	100°–120°F (38°–49°C)	Not Recommended	Not Recommended
<i>Titania</i> EXX12, EXX13, EXX14	70°–120°F (21°–49°C) 50% Max RH	100°–120°F (38°–49°C)	180°–230°F (82°–110°C) ½ Hour	250°–300°F (121°–149°C) 1 Hour
<i>Iron Powder M.S.</i> EXX24, EX27	70°–120°F (21°–49°C) 50% Max RH	100°–120°F (38°–49°C)	180°–230°F (82°–110°C) ½ Hour	400°–500°F (204°–260°C) ½ Hour
<i>Iron Powder Low Hydrogen</i> EXX18, EX28 <i>Low Hydrogen</i> EXX15, EX16 <i>Low Hydrogen High Tensile</i> EXXX15, EXX16, EXXX18	70°–120°F (21°–49°C) 50% Max RH	250°–300°F (121°–149°C)	180°–220°F (82°–104°C) 1½ Hour	650°–750°F (343°–399°C) 1 Hour
<i>Stainless</i> EXXX-15, EXXX-16	40°–120°F (4.5°–49°C) 60% (+/-10) Max RH	250°–300°F (121°–149°C)	180°–220°F (82°–104°C) 1½ Hour	500°–600°F (260°–316°C) 1 Hour
<i>Inconel</i> <i>Monel</i> <i>Kickel</i> <i>Hard-Surfacing</i>	40°–120°F (4.5°–49°C) 60% (+/-10) Max RH	150°–200°F (66°–93°C)	180°–230°F (82°–110°C) ½ Hour	Not Recommended
<i>Brasses</i> <i>Bronzes</i>	40°–120°F (4.5°–49°C) 60% (+/-10) Max RH	150°–200°F (66°–93°C)	Not Recommended	Not Recommended
<i>Granulated Flux</i> <i>Agglomerated Flux</i>	40°–120°F (4.5°–49°C) 60% (+/-10) Max RH	100°–200°F (38°–93°C)	Contact Manufacturer for Specific Temperatures	
<i>Flux Cored Wire</i> EXXT-1, EXXT-2, EXXT-5, EXXT-G	40°–120°F (4.5°–49°C) 60% (+/-10) Max RH	250°–300°F (121°–149°C)	Contact Manufacturer for Specific Temperatures	

NOTE: Proper redrying temperatures depend upon the electrode type and its condition. Contact your electrode manufacturer for specific instructions involving critical operations. Phoenix International, Inc. does not accept liability for damage to electrodes and/or welded products resulting from the use of this table. Temperatures and times shown are recommended and are not guaranteed to be correct.

The Guide to Electrode & Flux Stabilization

is also available as a laminated card and poster.

Please visit www.phx-international.com or email info@phx-international.com to receive yours FREE!

WARRANTY

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.

