


## Type 1 Series Portable Electrode Stabilization Ovens



PART #	DESCRIPTION (All 50-60 Cycles)	TEMP RANGE**	INSULATION	CHAMBER SIZE	CAPACITY	WEIGHT & DIMENSIONS
<i>Type 1 Series Ovens</i> 		300°F (149°C)	1½" fiberglass	3" diameter x 20" deep	10 lb (5 kg) of 18" electrodes	10½ lb 5¾" x 7¼" x 23"
1205500	100-240V AC/DC @ 60 watts* with indicator light and North American power cord					
1215500	100-240V AC/DC @ 60 watts* with indicator light and European/Schuko power cord					
1225500	100-240V AC/DC @ 60 watts* with indicator light and U.K. power cord					

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

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

# 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.

## 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 = .48 amps  
240V = .24 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.)



## 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.

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 as long as electrodes are being stored. When removed from power, the oven should be emptied and electrodes stored in a high capacity holding oven.

## 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.

*A laminated version and poster size version of the Guide To Electrode and Flux Stabilization is available by contacting Phoenix International, Inc.*

## 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](http://www.phx-international.com) or by contacting your local distributor.*



## 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.**

## TROUBLESHOOTING

### 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. 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, LOW HEAT, DOES NOT HEAT TO DESIRED TEMPERATURE

1. Check power supply for proper voltage
2. 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.

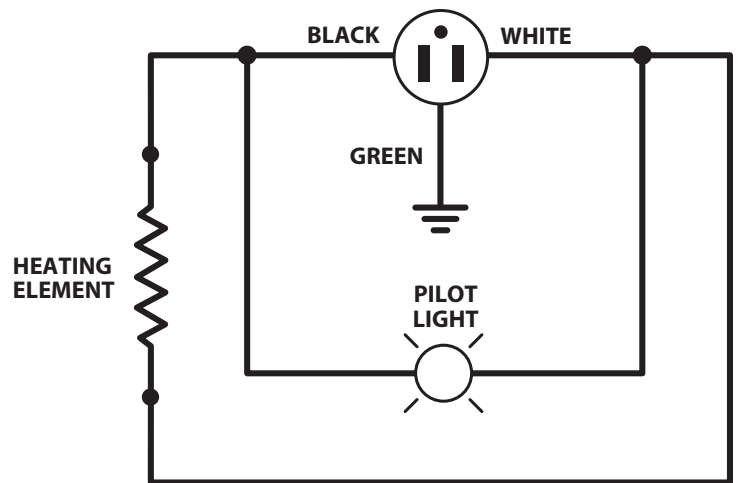


### CAUTION:

**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.**

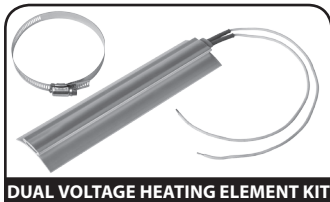
## WIRING DIAGRAM



### 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.**

## SUGGESTED SPARE PARTS



For normal daily operation, the following spare parts and quantities are recommended to have inventoried for every 10 units of Type 1 DryRod II ovens in use.

SUGGESTED SPARE PART	QUANTITY PER 10 OVENS	PART #
Dual Voltage Heating Element Kit	1	1257319
Locking Power Connection Kit	1	1257395

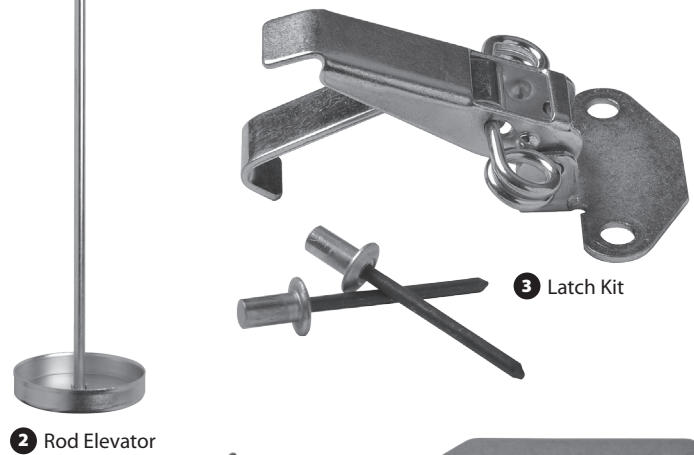


### NOTE:

**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.**

# REPLACEMENT PARTS

#	DESCRIPTION	QTY	PART #
2	Rod Elevator	1	1257260
	Insulation	1	1257290
6	Indicator Light	1	1257401
8	North American Power Cord	1	1257540
4	European/Schuko Power Cord	1	4131046
<b>1 Dual Voltage Heating Element Kit</b>			
	Dual Voltage Heating Element	1	1257319
	Band Clamp	1	
<b>7 Lid Assembly Kit</b>			
	Screws	2	1257220
	Lid Assembly	1	
	Insulation	1	
<b>3 Latch Kit</b>			
	Latch	1	1257380
	Rivet	2	
<b>Jumper Wire Kit</b>			
	Power Wires	1	1257530
	Ground Wire	1	
<b>8 Power Inlet Kit</b>			
	Rivet	2	1257390
	Locking Power Inlet	1	
<b>8 North American Locking Power Connection Kit</b>			
	Rivet	2	1257395
	Locking Power Inlet	1	
	120V North American Locking Cord	1	
<b>5 Base Cover Kit</b>			
	Base Cover	1	1257160
	Screws	2	



2 Rod Elevator



## ORDERING INFORMATION

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

Phoenix International, Inc.

8711 West Port Avenue • Milwaukee, WI 53224 USA • Telephone: 414-973-3400 • Fax: 414-973-3275

[www.phx-international.com](http://www.phx-international.com)

# 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
<b>Cellulose</b> EXX10, EX11, EXX20	70°–120°F (21°–49°C) 50% Max RH	100°–120°F (38°–49°C)	Not Recommended	Not Recommended
<b>Titania</b> EXX12, EX13, 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
<b>Iron Powder M.S.</b> 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
<b>Iron Powder Low Hydrogen</b> EXX18, EX28 <b>Low Hydrogen</b> EXX15, EX16 <b>Low Hydrogen High Tensile</b> 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
<b>Stainless</b> 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
<b>Inconel</b> <b>Monel</b> <b>Kickel</b> <b>Hard-Surfacing</b>	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
<b>Brasses</b> <b>Bronzes</b>	40°–120°F (4.5°–49°C) 60% (+/-10) Max RH	150°–200°F (66°–93°C)	Not Recommended	Not Recommended
<b>Granulated Flux</b> <b>Agglomerated Flux</b>	40°–120°F (4.5°–49°C) 60% (+/-10) Max RH	100°–200°F (38°–93°C)	Contact Manufacturer for Specific Temperatures	
<b>Flux Cored Wire</b> 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](http://www.phx-international.com) or email [info@phx-international.com](mailto: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.



Take your treated electrodes with you!

## Safetube® Industrial Storage Container

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- Short-term portable storage of electrodes.
- Pressure fitted O-ring maintains watertight seal and protection from dirt, dust, grease, moisture and more!
- Requires only one quarter turn for a positive threaded seal.
- Optional strap available for easy carrying in the field.
- Unlimited Uses - Protect electrodes, tools, manuals, electronics and more!

*For more information on these and other great products from*

**PHOENIX INTERNATIONAL, INC.**

*please visit our website at: [www.phx-international.com](http://www.phx-international.com)*

