

K-900 &

K-1000

Installation Instructions

Repair Parts List



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**Models K-900 & K-1000 Holding Ovens
Installation Instructions & Repair Parts List**

One Year Limited Warranty

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Henkel, Inc. warrants its products against defects in material and workmanship. Henkel, Inc. will either repair or replace without charge any properly installed product which fails under normal operating conditions within one year from date of installation, provided it is returned to our factory, transportation prepaid, and our inspection determined it to be defective under the terms of this warranty. The warranty covers only equipment manufactured by Henkel, Inc., and does not extend to transportation, installation, or replacement charges at the buyers' facility; nor does it apply to any other equipment of another manufacturer used in conjunctions with Henkel, Inc. equipment. No other warranty, expressed or implies exists beyond that included in this statement.
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Recommended Spare Parts

**When it is critical to have continuous operation of this unit;
we suggest having the following spare parts on hand:**

- Heating Element Assembly**
- Power Cord**
- Thermostat Assembly & Thermometer Kit**

General Information

The model K-900 is a 1000 lb. capacity holding oven. The K-1000 is a 1500 lbs. capacity holding oven. Both of these ovens are designed to hold 18" electrodes at moderate optimum temperatures to assure dryness. Construction is of steel which has been treated and then painted with a chemical-resistant blue finish. All Keen ovens are Mercury free.

K-900 SPECIFICATIONS

Electrode Capacity	1000lbs. 18" rods		
Volts	120V	240V	480V
Watts	3000W	3000W	3000W
Thermostat	Dial Adjustable		
Temperature	150°F-500°F		
Insulation	2"		
Interior Dimensions	18" X 18.5" X 36"		
Net Weight	175 lbs.		
Shipping Weight	282 lbs.		
Shipping Dimensions	30" X 30.5" X 53"		

K-1000 SPECIFICATIONS

Electrode Capacity	1500lbs. 18" rods		
Volts (Specify)	120V	240V	480V
Watts	3000W	3000W	3000W
Thermostat	Dial Adjustable		
Temperature	150°F-550°F		
Insulation	2"		
Interior Dimensions	27" X 20.5" X 40"		
Net Weight	300 lbs.		
Shipping Weight	335 lbs.		
Shipping Dimensions	29.5" X 32.5" X 55"		

Safety Precautions

Read all instructions completely before attempting to operate this unit.

***** SAVE THESE SAFETY INSTRUCTIONS *****

To reduce the risk of electrical shock, fire, or personal injury follow the guidelines below:

- Before connecting unit to a power source, be sure the voltage supplied is the same as that specified on the name plate of the unit.
- Check outlet to ensure proper grounding of the electrical cable. Have a licensed electrician check the A/C power outlet if you are not sure.
- Use this unit for its intended purpose as described by literature.
- Make sure power cord is located so that it will not be stepped on, tripped over, or otherwise subjected to stress of heat, oil, or sharp edges. Do not close doors on the cord.
- To reduce the risk of damage to the electric plug and cord, disconnect by plug rather than by the cord.
- Do not use this unit if cord or plug is in poor condition. If it has been exposed to weather or immersed in water, have a qualified serviceman inspect and replace parts as necessary.
- **WARNING! NEVER HANDLE PLUG, CORD, OR UNIT WITH WET HANDS OR WHILE STANDING IN WATER.**
- Use special care when moving heavily loaded units.
- Do not store combustible material on or around the unit.
- Do not operate this unit empty.
- When using the unit at a distance where an extension cord becomes necessary, a 3-conductor grounding cord of adequate size must be used for safety, and to prevent loss of power and overheating. Use only a UL listed extension cord suitable for outdoor use. Make certain wire size is large enough for A/C amperage rating of unit.

Operation

Load oven with desired amount of electrodes. To turn on the unit, simply plug the power cord into appropriate single phase A/C source and adjust thermostat to desired setting. (Check name plate for voltage.)

The ovens are supplied with a 6' UL listed type S.J. cord. However, due to the many different receptacle configurations in the field a plug is not supplied. When attaching plug to power cord, be sure the plug is an approved component and is rated for the proper voltage and amperage.

All units meet electrical code requirements when used with a grounding plug and a grounded receptical.

Temperature Setting

The thermostat is adjustable from 150°F (37.8°C) to 550°F (287.8°C). Turn thermostat knob to desired temperature by aligning with red line on chrome bezel. Pilot light indicates when power supply is supplied to the heating elements. The thermostat is accurate to $\pm 25^\circ\text{F}$ (14°C) at the sensor. Temperature variance is minimal throughout the oven due to the heat exchanging qualities of the Keen shelving system.

*****CAUTION: DO NOT USE ON D/C POWER SUPPLY!*****

Venting

The models K-900 and the K-1000 ovens are vented through two screen plugs at the rear of the oven.

***** CAUTION: SURFACE TEMPERATURE OF HEATING ELEMENTS WILL EXCEED 550°F. ELECTRODES ADVERSELY AFFECTED BY HIGH HEAT SHOULD BE STORED ON UPPER SHELVES OF OVEN. *****

Guide to Storage

See the enclosed guide to storage. This guide may be used in the absence of storage information from the electrode manufacturer. In critical situations, contact your electrode manufacturer.

Functional Description

These models are designed to hold large amounts of electrodes at moderate optimum temperatures providing protection from harmful moisture. The unique diagonal shelf design allows the storage of 50lb. electrode containers eliminating the need to remove rods from containers. The individual shelf compartments also facilitate the storage of different type rods in the same oven without disorder.

Scheduled Maintenance

The manufacturer recommends that the unit be unloaded and cleaned of debris and dust every six months. It is also recommended that a temperature probe be placed inside the unit and the thermostat calibration checked at this time.

Troubleshooting

The Keen oven models K-900 and K-1000 require a minimal amount of electrical knowledge to repair if necessary.

IF OVEN FAILS TO OPERATE – NO HEAT

1. Check power source.
2. Check power cord continuity. Replace cord assembly if faulty.
3. If pilot light glows, voltage is being supplied by elements. Check elements. Check element continuity. If defective, replace.
4. If thermostat cannot be heard clicking on and off when dial is rotated, and if pilot light fails to operate, replace thermostat.

IF OVEN OPERATES BUT FAILS TO REACH TEMPERATURE

1. Check name plate for proper voltage. Check voltage at outlet. The 240-volt ovens will operate on 120 volts, but will not reach optimum temperature.
2. If voltage is correct, check element continuity. The K-900 and K-1000 have 1000-watt elements. If one element checks badly, it is suggested to replace all three elements at this time and save remaining elements for emergency spares.

NOTE: If oven operates but interior temperature varies widely from thermostat setting, see calibration instructions.

IF OVEN OVERHEATS

If oven fails to cycle on and off and reaches temperatures above 550°F thermostat is faulty and needs replacing.

Corrective Maintenance

CHANGING THE HEATING ELEMENT

1. Disconnect oven from power source.
2. Remove back cover and insulation from rear of unit.
3. Disconnect electrical leads from elements.
4. From oven interior, unscrew element brackets from oven floor and pull elements through rear wall to remove from oven.
5. Install new elements and brackets.
6. Replace electrical leads on elements as per wiring diagram.
7. Check that element leads and terminals are not grounded to oven body.
8. Replace insulation and back cover.

THERMOSTAT CALIBRATION & ADJUSTMENT

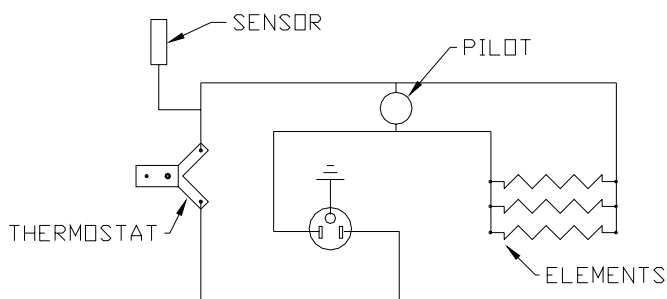
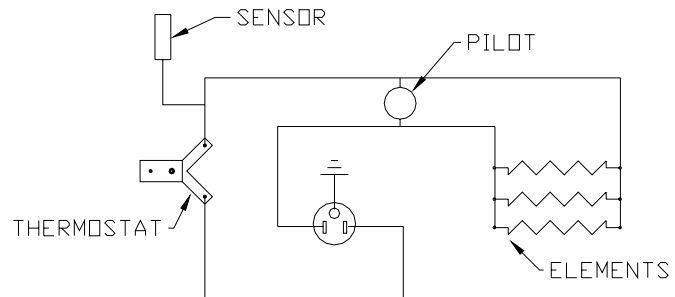
1. Turn on unit. Set control dial at desired temperature.
2. Allow control to cycle at least three times and observe temperature at the middle of the fourth cycle.
3. If calibration is required, carefully remove dial knob. Do not turn shaft.
4. Turn calibration screw in center of dial shaft clockwise to lower temperature and counter-clockwise to increase temperature.
5. Allow unit to cycle three times and observe temperature at middle of fourth cycle. Readjust calibration screw if necessary.
6. Replace dial knob.

CHANGING THE THERMOSTAT

1. Disconnect from the power source.
2. Remove cover plate from control box and disconnect wire connectors from thermostat leads.
3. Remove thermostat knob and chrome bezel. Knob is secured by recessed set screw.
4. From the inside of the oven, remove sensing tube from holder. Thermostat may now be removed and sensing tube pulled through side wall of oven.
5. Remove leads from old thermostat and place on new, being sure leads are securely screwed in place.
6. To replace thermostat, uncoil an adequate length of the sensing tube to reach holder. Insert sensing tube through oven wall and place in holder.
7. Place thermostat in control box and loosely fasten chrome bezel in place with red indicating line in upward position. Place knob on thermostat stem and adjust bezel so that knob turns freely. Remove knob and secure bezel. Replace knob and tighten set screw.
8. Reconnect electrical lead as per wiring diagram being sure all connections are secure and insulated. Replace control box cover.

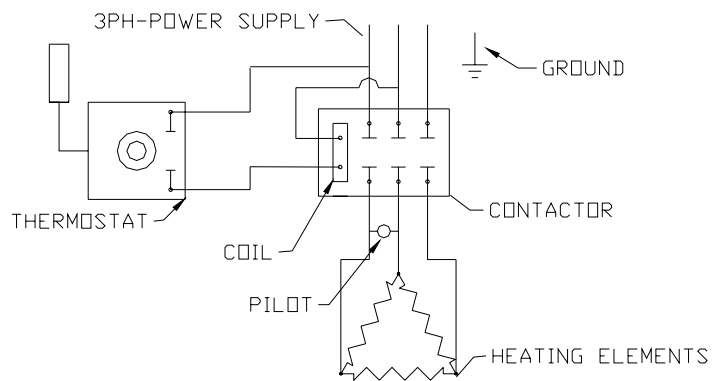
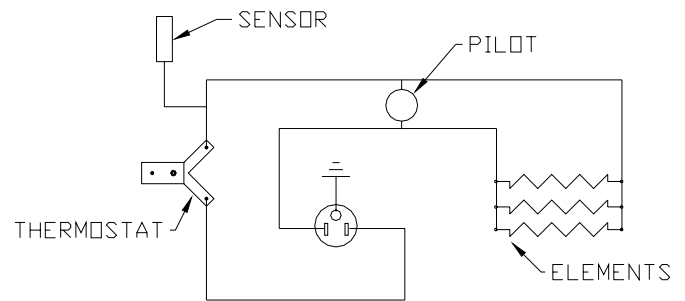
Wiring Diagrams K-900 & K-1000 Ovens

120Volts/3000 Watts
Grounding Plug 125 V/20A
NEMA L5-20P Not Provided



240Volts/3000 Watts
Grounding Plug 250 V/15A
NEMA L6-15P Not Provided

480Volts/3000 Watts
Grounding Plug 480 V/20A
NEMA L8-20P Not Provided



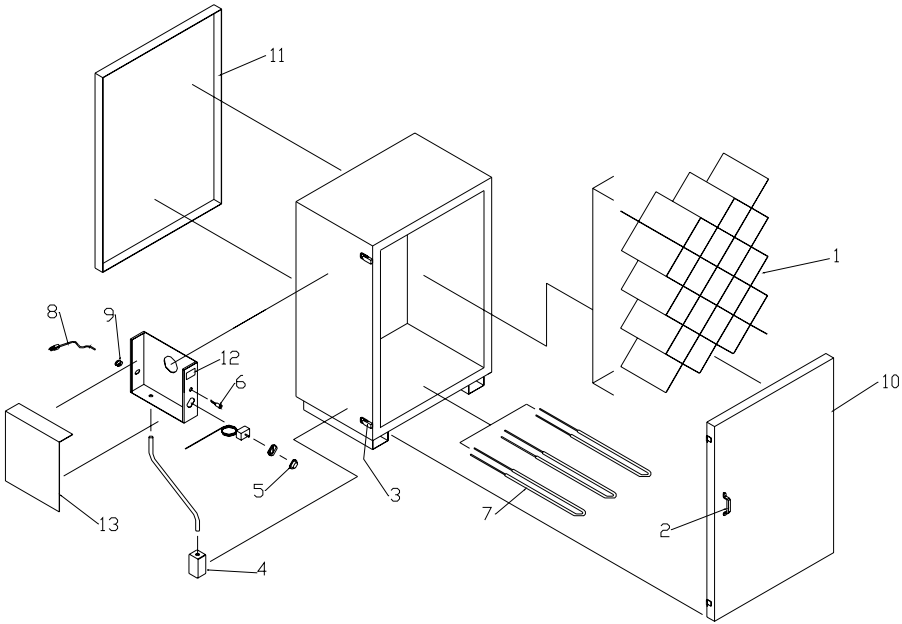
480Volts 3 Phase
Grounding Plug 480 V/20A
NEMA L8-20P Not Provided

Model K-900& K-1000 Repair Parts List

ITEM #	QUANTITY	DESCRIPTION	PART NUMBER
1	1	Shelf Assembly	
2	1	Door Pull	430102
3	2	Draw Pull Catches	430106
4	1	Handy Box	301033
5	1	Thermostat	301038
6	1	Neon Pilot Light	301085
7	3	Heating Elements	120V 301023 240V 301026 480V 301029
8	1	8' Power Cord	120V 301014 240V/480V 301097
9	1	Strain Relief	120V 301041 240V/480V 301043
10	1	Door	
11	1	Back Cover	
12	1	Name Plate	450103
13	1	Control Box	

K-900 & K-1000 W/T ACCESSORIES LIST

** Please state model number and serial number and specify voltage and wattage when ordering repair parts, spare parts, or accessory parts. All necessary attaching hardware is supplied with each part ordered
(Item numbers refer to pictorial drawings below for repair parts.)





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Flux and Electrode Stabilizing Guide

Type (AWS)	Air Conditioned Storage Before Opening	Dry Rod Oven Holding After Opening	After Exposure to Moisture a Sufficient Time to affect Weld Quality	
			Recondition Step 1	Rebake Step 2
Standard EXX10 EXX11 EXX12 EXX13 EXX20 EXX30	80°F ± 20° 60% ± 10% RH	140°F ± 30°	180°F ± 25° two hours	240°F ± 25° one hour
			Three hour total	
Iron Powder EXX14 EXX24 EXX27	90°F ± 20° 50% RH max	140°F ± 30°	180°F ± 25° two hours	325°F ± 25° one hour
			Three hour total	
Iron Powder-Low Hydrogen EXX18 EXX28	90°F ± 20° 50% RH max	400°F ± 50°	180°F ± 25° two hours	700°F ± 100° one-half hour
			Two & one-half hour total	
Low Hydrogen EXX15 EXX16	90°F ± 20° 50% RH max	400°F ± 50°	180°F ± 25° two hours	600°F ± 100° one-half hour
			Two & one-half hour total	
Low-Hydrogen High Tensile EXXX15 EXXX16	90°F ± 20° 50% RH max	400°F ± 50°	180°F ± 25° two hours	700°F ± 100° one-half hour
			Two & one-half hour total	
Stainless Inconel Monel Nickel Brasses Bronzes Hard Surfacing Special Alloys	90°F ± 20° 50% RH max	225°F ± 50°	180°F ± 25° one hour	350°F ± 50° one hour
			Two hour total	
Granulated or Agglomerated Flux	90°F ± 20° 50% RH max	240° F ± 50°	Not required	700°F ± 100° ∅ two hours

IMPORTANT:
 This table is offered as a guide to proper storage and oven holding temperatures for the most common electrodes in use today. In addition, recondition/rebake procedures for electrode coatings that have been exposed to moisture for a sufficient period of time to affect the weld quality are included. Good judgment and the manufacturer's recommendations should be your guide.

Note: In the HTS Stainless electrode groups, and 15 & 16 type coatings, there can be a greater difference in the maximum temperature requirements for rebaking than those shown. This can be handled by special request to the particular manufacturer involved.

CONTACT YOUR ELECTRODE MANUFACTURER FOR SPECIFIC INFORMATION INVOLVING CRITICAL OPERATIONS.

Electrode coating should not be exposed to the rebaking temperature without first having been reconditioned at a lower temperature. Failure to observe this rule will result in breakdown of electrode coatings.

After rebake, lower temperature to *holding level* until reissue.