KF-600

Installation Instructions

Repair Parts List

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Model KF-600 Flux Oven
Installation Instructions & Repair Parts List

One Year Limited Warranty

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.

Keen Ovens

Model KF-600

Specifications

Capacity	600 lbs. flux
Volts	240 V
Watts	2000 W
Thermostat	Dial Adjustable
Temperature	150ºF-550ºF
Insulation	2" TIW
Interior Dimensions	20" X 20" X 42" sloped bottom
Net Weight	250 lbs.
Shipping Weight	335lbs.
Shipping Dimensions	36" X 30" X 70"

* 480V Single Phase Available

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, Power Cord, Thermostat

General Information

The KF-600 is the most energy efficient flux oven on the market, using one-third the electricity and one half the stabilizing time. The bottom unloading design and slide valve allows for easy dispensing of flux. The unit is made from steel, treated, and then painted with a chemical resistant blue finish. All Keen ovens are Mercury free.

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 600 lbs. of flux. To turn unit on, simply plug the power cord into appropriate single phase A/C source and adjust thermostat to desired setting. All flux ovens are supplied with 8' UL listed type SJ cord.

To turn on the unit, simply plug the 8' UL listed power cord into power source of appropriate voltage. However, the plug is not supplied due to the many different receptacle configurations in the field. When attaching the plug to the 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 receptacle. To dispense flux from simply place a container on bottom shelf of oven and pull slide valve open.

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

Temperature Setting

The thermostat is adjustable from 150ºF (38.8 C) to 550ºF (287.8 C). Turn thermostat knob to desired temperature by aligning with red line on chrome bezel. Pilot light indicates when power is supplied to the heating element. The thermostat is accurate to ± 25º F (14 C) at the sensor.

Guide to Storage

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

Functional Description

The model KF-600 is designed to store 600 lbs. of welding flux at moderate optimum temperatures. Due to the location of the elements in the storage hopper and the construction of the heating elements, this unit will stabilize flux in a minimal amount of time. The oven is top loading and welding flux is easily dispensed through a slide valve located on the bottom of the oven.

Scheduled Maintenance

The manufacturer recommends that after each use the operator cleans all flux residues from elements and element brackets. Flux build-up on elements may cause hot spots and shorten element life. It is also recommended that the thermostat be recalibrated every six months. Test thermometer probe should be attached to oven thermowell and oven loading during calibration.

Troubleshooting: The Keen oven model KF-600 requires 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 thermostat cannot be heard clicking on and off when dial is rotated, and if pilot light fails to operate, check thermostat for continuity. If continuity is not present between thermostat terminals, replace thermostat. (See "Corrective Maintenance" section.)
4. If thermostat is good, check continuity of element. If continuity is not present, replace element.

IF OVEN HEATS BUT DOES NOT REACH TEMPERATURE

One or more elements may be faulty. Check continuity and replace faulty elements.

IF OVEN OVERHEATS

If oven fails to cycle on and off and reaches temperatures over 550ºF, thermostat is faulty and needs replacing.

Corrective Maintenance

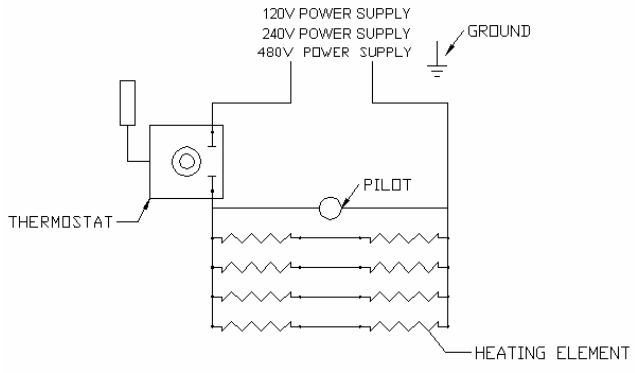
CHANGING HEATING ELEMENTS

1. Disconnect power source and empty oven of flux.
2. Remove control box cover plate and remove wire connectors from element leads.
3. Remove element cover and element leads on elements to be changed. (Be sure to use back-up wrench on element terminals.)
4. From interior of oven, unbolt element bracket and remove element.
5. Pass new element through side wall of oven and rebolt element bracket in place. (New element brackets are shipped with replacement elements.)
6. Replace element leads using a back-up wrench to tighten terminals.
7. Replace element cover and reconnect element leads in control box. Replace control box cover.

CHANGING THE THERMOSTAT

1. Disconnect from the power source.
2. Remove cover plate from control box.
3. Remove wire connectors (2) from thermostat leads. Loosen set screw on thermostat knob and remove knob.
4. Unscrew and remove chrome bezel.
5. Thermostat may now be moved from control box and thermostat sensing tube pulled from holder.
6. To replace new thermostat, attach leads from old thermostat to new. Uncoil and adequate length of the sensing tube to reach center of oven.
7. Place thermostat in control box and loosely mount chrome bezel in place with red indicating line in upward position.
8. Place knob on thermostat and adjust bezel so knob turns freely. When knob turns freely, remove and tighten bezel, replace knob and tighten set screw.
9. Reconnect electrical leads as per wiring diagram. Replace cover plate.

Model KF-600 Wiring Diagrams



THERMOSTAT CALIBRATION & ADJUSTMENT

1. Turn on unit. Set control knob at desired temperature.
2. Allow control to cycle three times and observe temperature in 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.
5. Allow unit to cycle three times and observe temperature at middle of fourth cycle. Readjust calibration screw if necessary. Replace deal knob.

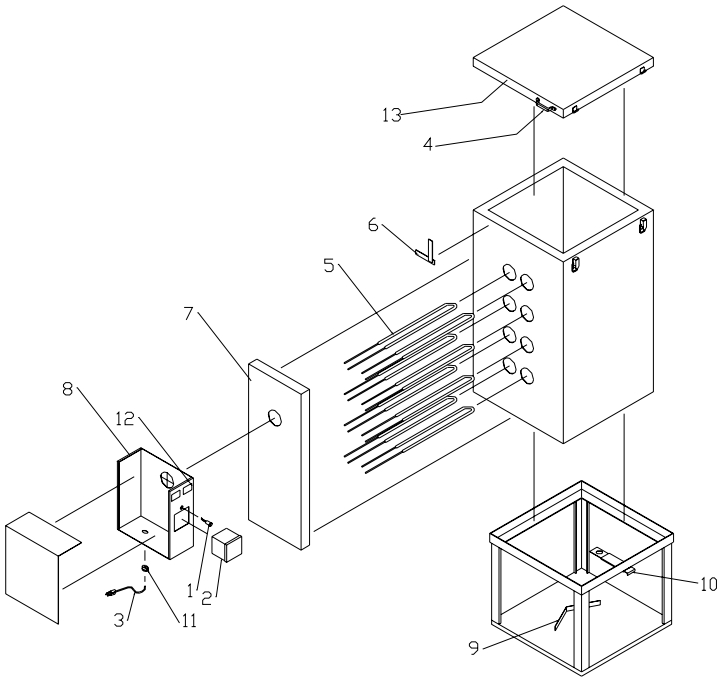
KF- 600 ACCESSORIES LIST

** 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.)

Model KF-600 Repair Parts List

ITEM #	QUANTITY	DESCRIPTION		PART NUMBER
1	1	Neon Pilot		301085
2	1	Temperature Control		301038
3	1	8' SJ Cord		301018
4	2	Handles		430102
5	8	Elements	240V/2000W	301026
			480V2000W	301029
6	1	Lid Prop		
7	1	Element Cover		
8	1	Control Box		
9	1	Bucket Stop		
10	1	Valve Slide		
11	1	Strain Relief		301043
12	1	Name Plate		450103
13	1	Lid		



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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.