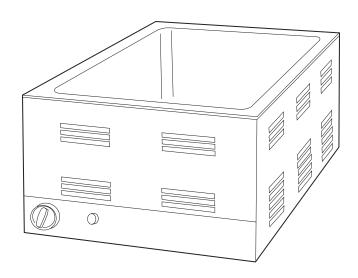
Duke

Your Solutions Partner

Service Manual



COUNTERTOP WARMER

MODEL ACTW-1

Please read this manual completely before attempting to install, operate or service this equipment

This manual is Copyright © 2011 Duke Manufacturing Company. All rights reserved.

Reproduction without written permission is prohibited. Duke is a registered trademark of the Duke Manufacturing Company.

Duke Manufacturing Company

2305 N. Broadway St. Louis, MO 63102 Phone: 314-231-1130

Toll Free: 1-800-735-3853 Fax: 314-231-5074 www.dukemfg.com

IMPORTANT WARNING AND SAFETY INFORMATION

WARNING

READ THIS MANUAL THOROUGHLY BEFORE OPERATING, INSTALLING OR PERFORMING MAINTENANCE ON THE EQUIPMENT.

WARNING

FAILURE TO FOLLOW INSTRUCTIONS IN THIS MANUAL CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH.

WARNING

DO NOT USE OR STORE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

WARNING

DO NOT OPERATE THIS EQUIPMENT WITHOUT PROPERLY PLACING AND SECURING ALL COVER AND ACCESS PANELS.

CAUTION:



Observe the following:

- Provide and maintain adequate minimum clearances from all walls and combustible materials.
- Provide and maintain adequate clearance for air openings.
- Keep the equipment area free and clear of combustible material.
- Operate equipment only on the type of electricity indicated on the specification plate.
- Retain this manual for future reference.

TABLE OF CONTENTS

SAFETY	2
TABLE OF CONTENTS	3
SPECIFICATIONS	4
INSTALLATION	4
LOCATION	4
LEVELING	4
STABILIZING	
ELECTRICAL CONNECTION	4
MAINTENANCE	4
STAINLESS STEEL CARE AND CLEANING	
SERVICE INFORMATION	6
TROUBLESHOOTING PROCEDURES	
PARTS REPLACEMENT	7
INFINITE SWITCH REPLACEMENT	
GENERAL	
INDICATOR LAMP REPLACEMENT	7
GENERAL	
ELEMENT REPLACEMENT	8
GENERAL	
HI-LIMIT THERMOSTATIC SWITCH REPLACEMENT	
GENERAL	
POWER CORD REPLACEMENT	
GENERAL	9

SPECIFICATIONS

MODEL	DESCRIPTION	VOLTAGE	AMPS	PH	HEIGHT	WIDTH	LENGTH
ACTW-1	Countertop Warmer	120VAC	10	1	10-1/4"	14-1/2"	22-1/2"

INSTALLATION

Location

The unit represented in this manual is intended for indoor use only and is designed for countertop usage. For efficient operation, provide adequate air circulation inside and out.

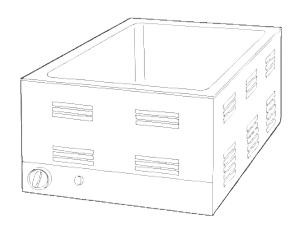


Figure 1 **ACTW-1 Countertop Warmer**

Leveling

Place unit on a firm, level countertop capable of supporting the warmer.

Stabilizing

This unit is provided with rubber feet that designed to keep the unit from sliding or moving around during use. Make sure feet are properly installed.

Electrical Connection

The Countertop Warmer is available as a 115VAC 60 Hz 1200 watt unit and is provided with a standard three prong electrical cord rated for the unit wattage. This unit must be plugged into a properly wired GFI outlet.

WARNING

REFER TO THE AMPERAGE DATA LIST IN THE SPECIFICATIONS OR THE SERIAL TAG DATA AND YOUR LOCAL CODE OR THE NATIONAL **ELECTRICAL CODE TO BE SURE UNIT** IS CONNECTED TO THE PROPER POWER SOURCE. **A PROTECTED** CIRCUIT OF THE CORRECT VOLTAGE AND AMPERAGE MUST BE RUN FOR CONNECTION OF THE SUPPLY CORD OR PERMANENT CONNECTION TO THE UNIT. THE POWER MUST BE TURNED OFF AND DISCONNECTED WHENEVER PERFORMING MAINTENANCE OR RE-PAIR FUNCTIONS.

MAINTENANCE

Stainless Steel Care and Cleaning

Stainless steel contains 70-80% iron, which will rust. It also contains 12-30% chromium, which forms an invisible passive film over the steel surface and acts as a shield against corrosion. As long as the protective film remains intact, the metal will not corrode. However, if the film is broken or contaminated, outside elements can begin to breakdown the steel and begin to form rust or discoloration. To prevent rust and discoloration on stainless steel, several important steps need to be taken.



CAUTION: Never use steel wool pads, wire brushes or scrapers. Avoid cleaning solutions that contain alkaline or chloride.

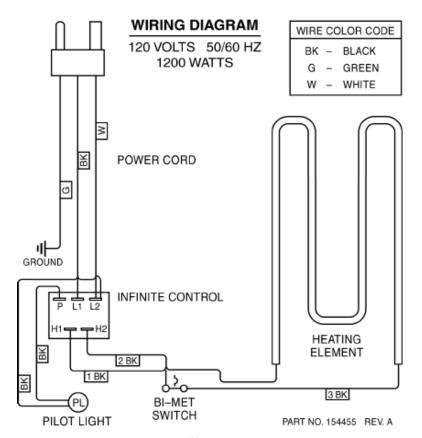


Figure 2 **Electrical Schematic**

Use alkaline based or non-chloride cleaning solutions. Anything containing chloride will damage the protective film on stainless steel. Chlorides are found in household and industrial cleaners and also in hard water and salts. If a chloride or alkaline cleaner has been used, rinse repeatedly and dry thoroughly.

Always use only soft cloths or plastic scouring pads. For routine cleaning, use warm soapy water. For stubborn stains, use a non-abrasive cleanser. For heaving grease, use a degreaser. For best results, rub with the grain of the steel.

Pitting and cracking are early signs of stainless steel breakdown. Special stainless steel cleansers can restore and preserve the protective film. If signs of breakdown appear, thoroughly clean and dry all surfaces. Begin regular application of a high quality stainless steel cleaner according to the manufacturer's instructions. Again, always rub with the grain of the steel for best results.



CAUTION: Never use an acid-based cleanser! Be sure to clean all food products from any stainless steel surface. Many food products contain acid, which can deteriorate the finish. Common foods include tomatoes. peppers and other vegetables.

WARNING

THE POWER MUST BE TURNED OFF AND DISCONNECTED AT ALL TIMES DURING MAINTENANCE OR REPAIR FUNCTIONS.

SERVICE INFORMATION

Troubleshooting Procedure

SYMPTOM	CAUSE	REMEDY	
Element Does Not Heat:	Electrical power disconnected	Plug unit into a GFI outlet	
	Power source circuit breaker tripped	Check circuit breaker and reset	
	Bad infinite switch	Check infinite switch using a multimeter	
	Corroded or loose connections	Check and tighten all connections	
	Bad or tripped hi-limit switch	Check hi-limit switch operation and continuity	
Element Overheats:	Bad or tripped hi-limit switch	Check hi-limit switch operation and continuity	
Indicator Lamp Not On:	Electrical power disconnected	Plug unit into a GFI outlet	
	Power source circuit breaker tripped	Check circuit breaker and reset	
	Bad infinite switch	Check infinite switch using a multimeter	
	Bulb burnt out	Replace bulb	

Infinite Switch Replacement

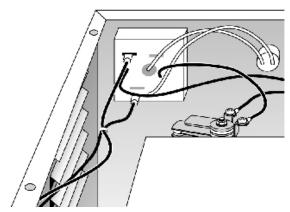


Figure 3
Location of Infinite Switch (Bottom Removed)

General

The infinite switch (see Figure 3) is located on the front of the control panel.

- 1. Unplug the unit from power source.
- 2. Remove the bottom cover.
- 3. Tag and disconnect the infinite switch wiring.
- 4. Remove the knob.
- 5. Remove infinite switch mounting screws.
- 6. Remove infinite switch from front panel.
- 7. Install replacement infinite switch, mounting screws and knob.
- 8. Using the tags, reconnect the wires to the infinite switch.
- 9. Reinstall the bottom cover.
- 10. Plug the unit into a GFI outlet.

Indicator Lamp Replacement

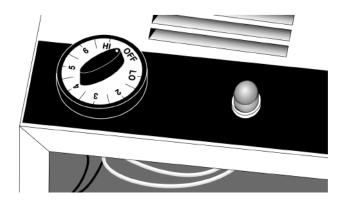


Figure 4
Location of Indicator Lamp Button

General

The indicator lamp (see Figure 4) is located on the control panel to the right of the infinite switch.

- 1. Disconnect unit from power source.
- 2. Remove the bottom cover.
- 3. Tag the indicator lamp wiring and disconnect it from the infinite switch.
- 4. Unscrew the indicator lamp assembly.
- 5. Remove the indicator lamp assembly.
- 6. Replace the indicator lamp assembly.
- 7. Screw the indicator lamp lens on.
- 8. Using the tags, reconnect the indicator lamp wiring.
- 9. Install the bottom cover.
- 10. Plug the unit into a GFI outlet.

Element Replacement

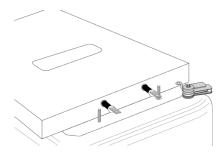


Figure 5
Location of Element Pan

General

The element pan is located on the under side of the pan (see Figure 5). The element is mounted on the element pan.

- 1. Unplug unit from power source.
- 2. Remove the bottom cover.
- 3. Tag and disconnect the element wiring.
- 4. Remove the element pan.
- 5. Remove the element from the pan (see Figure 6).

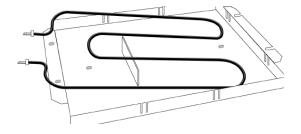


Figure 6
Element Installation

6. Replace new element in the pan.

caution: Use care when handling the new element, which will break very easily.

- 7. Use an ohm meter to test the new element for continuity.
- 8. Replace the element pan.
- 9. Using the tags, reconnect the element wires.
- 10. Install the bottom cover.
- 11. Plug the unit into a GFI outlet.

Hi-Limit Thermostatic Switch Replacement

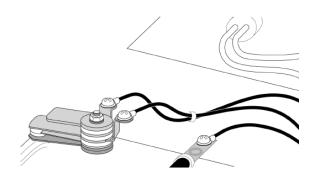


Figure 7
Location of Hi-Limit Thermostatic Switch

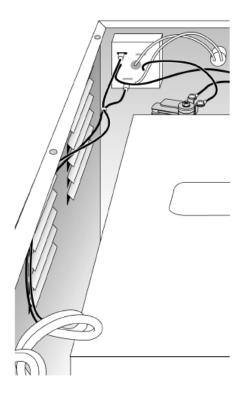
General

The Hi-Limit thermostatic switch is located on the bottom of the pan next to the element wires (see Figure 7).

- 1. Disconnect unit from power source.
- 2. Remove the bottom cover.
- 3. Tag the wires to the Hi-Limit thermostatic switch and disconnect them.
- 4. Remove the Hi-Limit thermostatic switch.
- 5. Replace the Hi-Limit thermostatic switch.
- 6. Using the tags, reconnect the Hi-Limit thermostatic switch wiring.
- 7. Install the bottom cover.
- 8. Connect the unit to its power source.

Power Cord Replacement

Figure 8
Power Cord Routing



General

The power cord is dressed along the side of the unit and exits at the rear (see Figure 8).

- 1. Disconnect unit from power source.
- Remove the bottom cover.
- 3. Tag the wires and terminals and disconnect them.
- 4. Remove the power cord from its retaining clips.
- 5. Remove the power cord and its retainer ring from the unit.
- 6. Pre-dress the new cord to determine amount of cord needed inside of the unit.
- 7. Knot the cord behind the retainer ring.
- 8. Install the new cord and retainer ring into the unit.
- 9. Dress the cord using the retaining clips.
- 10. Using the tags, reconnect the power cord to the unit.
- 11. Install the bottom cover.
- 12. Plug unit into a GFI outlet.

NOTES

NOTES



Your Solutions Partner

Duke Manufacturing Company

2305 N. Broadway St. Louis, MO 63102 Phone: 314-231-1130 Toll Free: 1-800-735-3853

Fax: 314-231-5074 www.dukemfg.com 219556