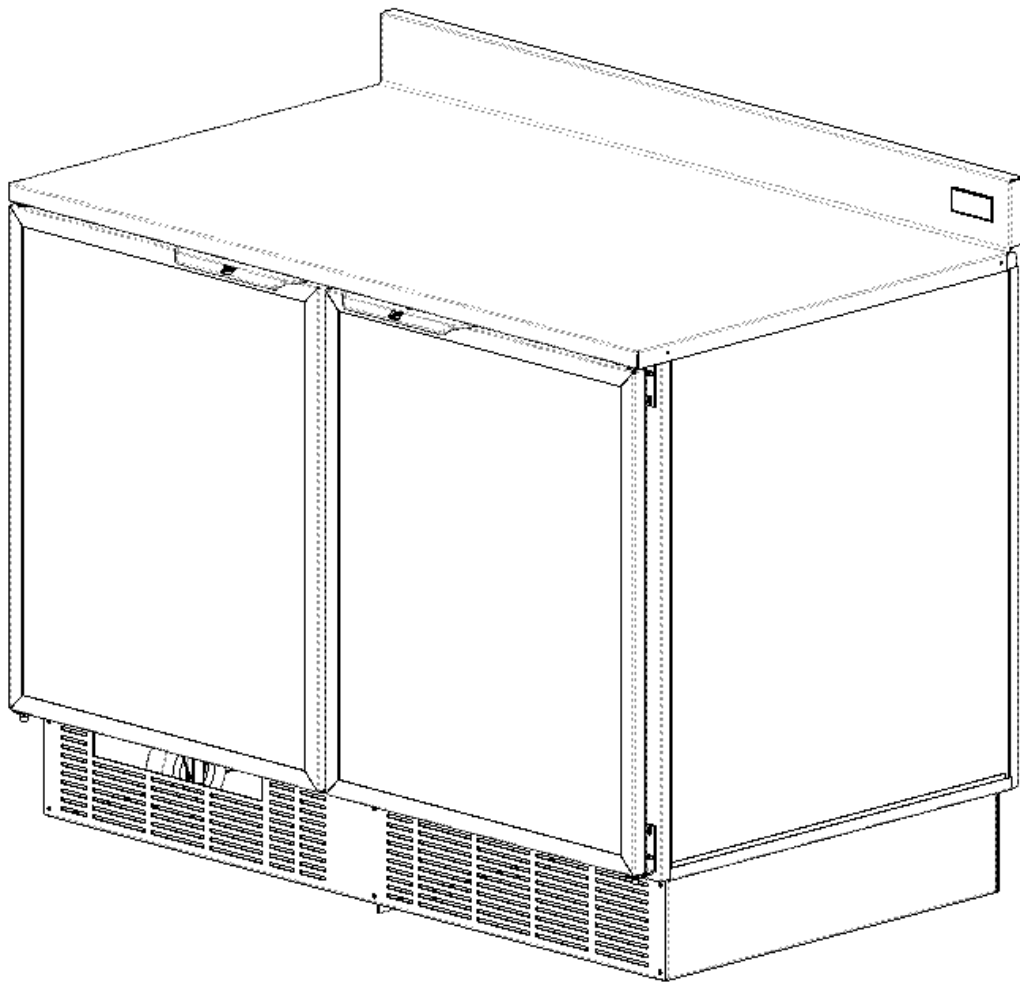




Your Solutions Partner

Installation and Operation Manual

Refrigerated Counter RUF48 Digital



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

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IMPORTANT WARNING AND SAFETY INFORMATION

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

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

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

UNLESS ALL COVER AND ACCESS PANELS ARE IN PLACE AND PROPERLY SECURED, DO NOT OPERATE THIS EQUIPMENT.

CAUTION: OBSERVE THE FOLLOWING:

- Minimum clearances must be maintained from all walls and combustible materials.
- Keep the equipment area free and clear of combustible material.
- Adequate clearance for air openings.
- Unit exhausts air to the bottom and the rear.
- Do not set unit on a curb or seal to the wall.
- Do not block the slots in the front kickplate
- Operate equipment only on the type of electricity indicated on the specification plate.
- Retain this manual for future reference.

INTRODUCTION

This publication contains information regarding the installation and operation of Duke Refrigerated Counter units. The information contained within applies to the models RUF 48. Please read this manual completely before attempting to install and/or operate this equipment.

Model number RUF 48 describes the 48" wide counter length of the Refrigerated Counter. (Fig. 1)

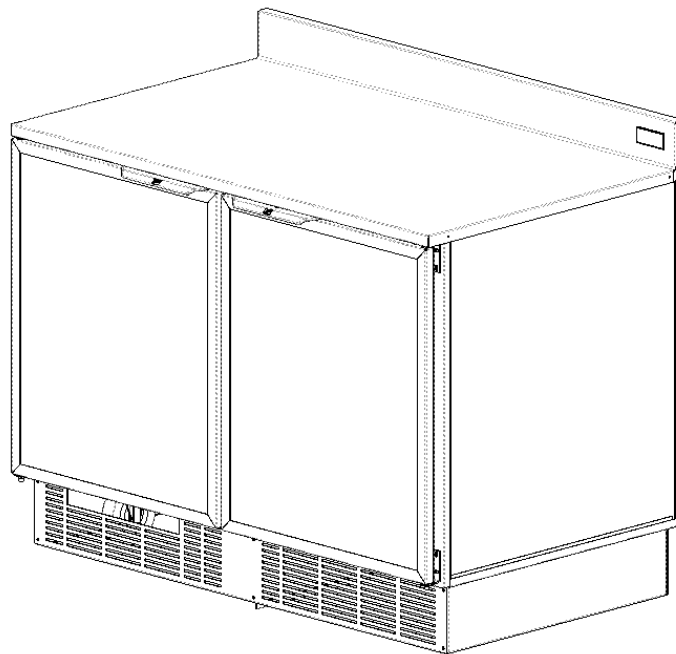


Figure. 1
RUF 48

SERIAL NUMBER

Always have the serial number of your unit available when calling for parts or service. The serial number can be found on the data plate inside the refrigerated compartment.

RECEIVING & INSPECTING THE EQUIPMENT

Care should be taken during unloading so the equipment is not damaged while being moved into the building.

1. Visually inspect the exterior of the package and skid or container. Any damage should be noted and reported to the delivering carrier immediately.
2. If damaged, open and inspect the contents with the carrier.
3. In the event that the exterior is not damaged, yet upon opening, there is concealed damage to the equipment notify the carrier. Notification should be made verbally as well as in written form.
4. Request an inspection by the shipping company of the damaged equipment. This should be done within 10 days from receipt of the equipment.
5. Check the lower portion of the unit to be sure legs/casters are not bent.
6. Also view compressor compartment housing and visually inspect the refrigeration package. Be sure lines are secure and base is still intact.
7. Freight carriers can supply the necessary damage forms upon request.
8. Retain all shipping material until an inspection has been made or waived.

SPECIFICATIONS

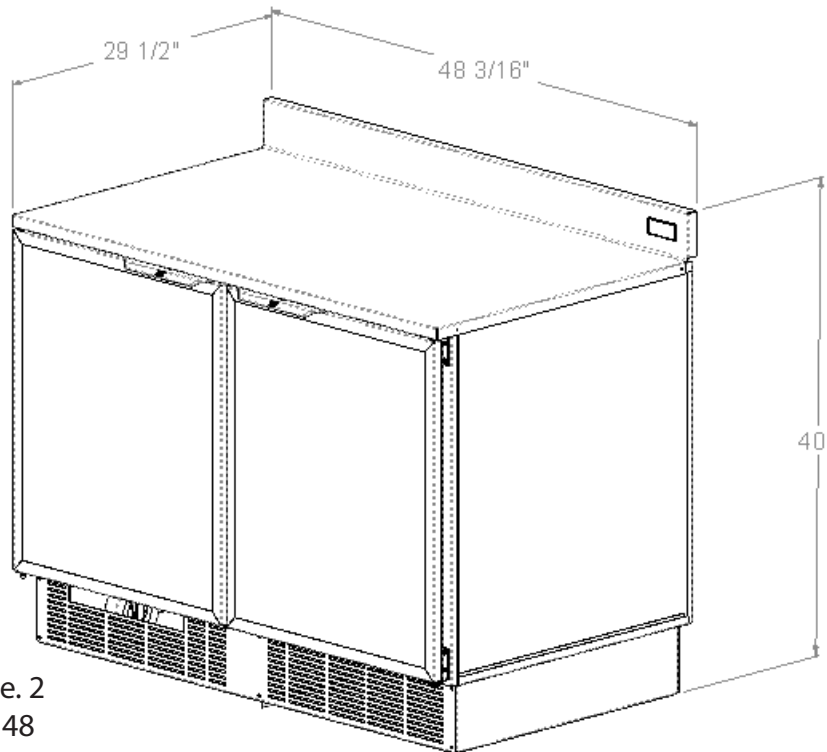


Figure. 2
RUF 48

| Model | Volts | Frequency (Hz) | Amps | Watts (Label) | HEIGHT | WIDTH | LENGTH |
|----------|-------|----------------|------|---------------|-----------|-----------|-----------|
| RUF-48 M | 120 | 60 | 4.2 | N/A | 40.00 In. | 29.50 In. | 48.18 In. |
| RUF-48 M | 220 | 60 | 2.7 | 590 | 40.00 In. | 29.50 In. | 48.18 In. |
| RUF-48 M | 230 | 50 | 2.5 | 580 | 40.00 In. | 29.50 In. | 48.18 In. |

INSTALLATION

INSTALLATION - LOCATION

Units represented in this manual are intended for indoor use only. Be sure the location chosen has a floor or counter strong enough to support the total weight of the units. Reinforce the floor or counter if necessary to provide for maximum loading. For the most efficient operation, be sure to provide good air circulation inside and out. These units should be located so that they can be moved for service. Major service to the refrigeration system is done from the rear of the cabinet.

INSTALLATION – Inside Unit

Take care not to block air flow to the fans and allow space along the front, back and sides.

INSTALLATION – Outside Unit

Be sure that the unit has access to ample air; avoid hot corners and locations near stoves and ovens.

CAUTION:

This unit exhausts air to the bottom and the back. Do not seal the unit to the wall or set unit on a curb. The ventilation slots in the kickplate must remain open.

INSTALLATION – Leveling

Be sure that the units are placed on a firm, flat surface/floor. Check for cracks in flooring or tile and avoid these areas if possible. If necessary place support pads, properly rated for the weight of the unit, to “bridge” uneven or cracked flooring. Level unit accordingly.

INSTALLATION – Stabilizing

Make sure the unit is installed on a flat surface to insure that the unit is solid to the floor at all four contact points. Insure that the unit does not “rock” when pressure is applied to the top corners.

INSTALLATION – Electrical Wiring

The RUF 48 is available as a 120VAC, 60 Hz or as 230VAC, 50 Hz dependent on model. All electrical connections should be performed by a certified electrician and should comply with local electrical codes for your municipality.

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 PERFORM-ING MAINTENANCE OR REPAIR FUNCTIONS.

OPERATION

OPERATION – Location of Controls

The refrigeration control/temperature setting adjustment is located on the back splash. This is the only user adjustable component on the unit.

OPERATION – Operating Procedure

Press and hold the (i) button to display setpoint. Keep (i) button pressed and use the up/down arrows to adjust setpoint. When the (i) button is released, the new setpoint is stored. To exit from the setup, press the power button or wait 30 seconds. Display will display “dEF” while unit is in defrost mode. Check the cooling specifications required for the products/goods to be stored.

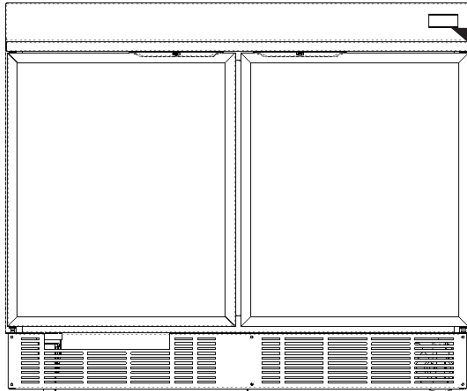


Figure. 4



Figure. 3

Refrigeration control / Temperature display

Use a simple thermometer to set to a specific temperature. Allow time for temperature changes before making a final temperature check.

MAINTENANCE

MAINTENANCE – Stainless Steel Care & Cleaning

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

Proper cleaning of stainless steel requires soft cloths or plastic scouring pads.

CAUTION: Never use steel pads, wire brushes or scrapers.

Cleaning solutions need to be alkaline based or non-chloride cleaners. Any cleaner containing chlorides will damage the protective film of the stainless steel. Chlorides are also commonly found in hard water, salts and household and industrial cleaners. If cleaners containing chlorides are used, be sure to rinse repeatedly and dry thoroughly upon completion.

Routine cleaning of stainless steel can be done with soap and water. Extreme stains or grease should be cleaned with a non-abrasive cleaner and plastic scrub pad. It is always good to rub with the grain of the steel. There are also stain-less steel cleaners available which can restore and preserve the finish of the steels protective layer.

Early signs of stainless steel breakdown can consist of small pits and cracks. If this has begun, clean thoroughly and start to apply stain-less steel cleaners in attempt to restore the passivity of steel.

MAINTENANCE

WARNING

**NEVER USE AN ACID BASED CLEANING SOLUTION!
MANY FOOD PRODUCTS HAVE AN ACIDIC CONTENT WHICH CAN DETERIORATE THE FINISH.
BE SURE TO CLEAN ALL FOOD PRODUCTS FROM ANY STAINLESS STEEL SURFACE.
COMMON ITEMS INCLUDE, TOMATOES, PEPPERS AND OTHER VEGETABLES.**

WARNING

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

MAINTENANCE – Cleaning the Condenser Coil

The condenser coil is located behind the unit (See Figure 5). This unit has a replaceable filter, discard old filters. The condenser coil requires regular cleaning and is recommended every 60 days. However, in some instances you may find that there is a large amount of debris, dust or grease that has accumulated prior to the 60 day time frame. In these cases the condenser coil should be cleaned every 30 days.

If the build up on the coil consists of only light dust and debris the condenser coil can be cleaned with a simple brush, heavier dust build up may require a vacuum or even compressed air to blow through the condenser coil.

If heavy grease is present degreasing agents are available for refrigeration use and specifically for the condenser coils. The condenser coil may require a spray with the degreasing agent and then blown through with compressed air.

Failure to maintain a clean condenser coil can initially cause high temperatures and excessive run times. Continuous operation with dirty or clogged condenser coils can result in compressor failures. Neglecting the condenser coil cleaning procedures will void any warranties associated with the compressor or cost to replace the compressor.

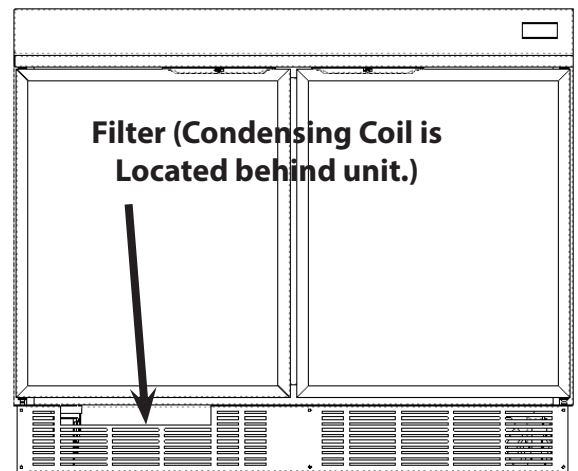


Figure. 5



CAUTION:



**NEVER USE A HIGH-PRESSURE WATER WASH FOR THIS CLEANING PROCEDURE AS WATER CAN
DAMAGE ELECTRICAL COMPONENTS LOCATED NEAR OR AT THE CONDENSER COIL.**

MAINTENANCE

MAINTENANCE – Door Gasket Care

Gaskets require regular cleaning to prevent mold and mildew build up and also to keep the elasticity of the gasket. Gasket cleaning can be done with the use of warm soapy water. Avoid full strength cleaning products on gaskets as this can cause them to become brittle and prevent proper seals. Also, never use sharp tools or knives to scrape or clean the gasket which could possibly tear the gasket and rip the bellows.

Gaskets can easily be replaced and do not require the use of tools or authorized service persons. The gaskets are “Dart” style and can be pulled out of the grove in the door and new gaskets can be “pressed” back into place.

MAINTENANCE – Drain

Each unit has a drain tube located in the rear the unit which removes condensation from the evaporator coil and deposits it onto a drain pan where it can evaporate. If you notice excessive water accumulation on the inside of the unit be sure that the drain tube is connected from the evaporator housing to the condensate evaporator drain pan. If water is collecting underneath the unit you may want to check the condensate evaporator drain tube to be sure it is still located above the drain pan. The leveling of the unit is also important as the units are designed to drain properly when on a level surface, if your floor is not level this can also cause drain problems. Be sure the drain pan is kept free of dirt, dust and other debris as excessive amounts will cause water to back up and overflow from the drain pan.

MAINTENANCE – Drain Pan Access

The drain pan and drain tube can be accessed from the rear of the unit. Pull the unit away from wall to expose the rear of the cabinet. The drain pan is located on the left/rear of the unit.

NOTES



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