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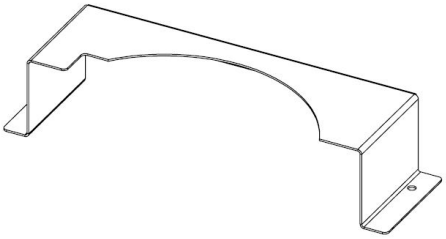
Installation Instructions

Flex-Tech Cast In Heater Kit # 600498

Parts In Kit

169806 Cast In Heater



169995 Cover

169604 Grommet

297325 Sealant

Tools - Required

Phillips Screw Driver

3/32" Allen Wrench

11/32" Nut Driver

Straight Blade Screw Driver

9/16" Wrench

Harware included not Pictured

- 2ea. 169614 Spacer
- 2ea. 169612 Serrated Nut
- 1ea. 297050 8-32X1/4" Screw
- 6ea. 279500 8/32X1/2" Screw
- 2ea. 10280400 10-24X3/8 Screw

CAUTION: **Please read these instructions completely before attempting to service this equipment**

Duke Manufacturing Co.

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P/N 169593
REV A Date 10/24/2017

Instructions Cast In Heater

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IMPORTANT SAFETY INSTRUCTIONS

Throughout this manual, you will find the following safety words and symbols that signify important safety issues with regards to operating or maintaining the equipment.

⚠WARNING — **Indicates a hazardous situation which, if not avoided, could result in death or serious injury.**

⚠ CAUTION — **Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.**

CAUTION — **Indicates Important Information**

 **Indicates electrical shock hazard which, if not avoided, could result in death or serious injury and/or equipment damage.**

 **Indicates hot surface which, if not avoided, could result in minor or moderate injury.**

CAUTION Electrical shock hazard. Do not wash with water jet or hose.

Reference: LOCKOUT / TAGOUT PROCEDURE

- *The worker shall check to be sure that no one is operating the machinery BEFORE turning -off the power. The machine operator shall be informed before the power is turned off. Sudden loss of power could cause an accident.*
- *All energy sources that could activate the machine shall be locked out (blocked/tagged).*
- *The main valve or main electrical disconnect shall be tested to be sure that the power to the machine is off.*
- *Electrical circuits shall be checked with proper and calibrated electrical testing equipment. An electrical failure could energize the equipment even if the switch is in the off position.*

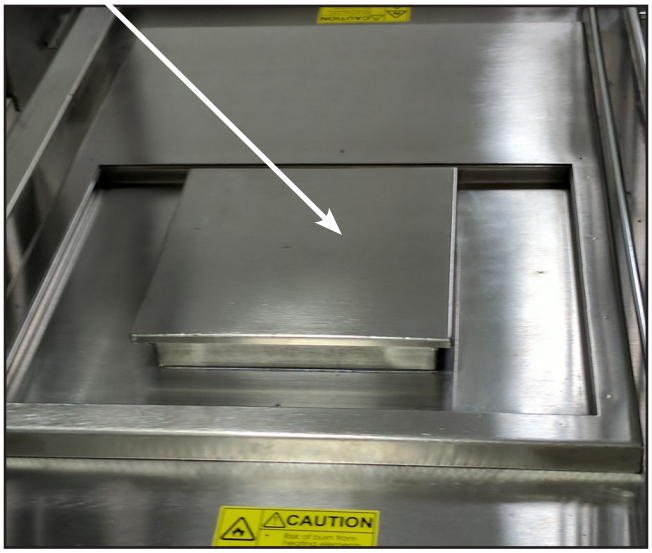
I. Removal of Old Heater

WARNING ***HAZARDOUS VOLTAGE***
CAUTION ***RISK OF ELECTRIC SHOCK***

Step 1
Turn OFF the unit's Power.
Disconnect unit from Main Supply Voltage or use lockout / tagout procedures if required.

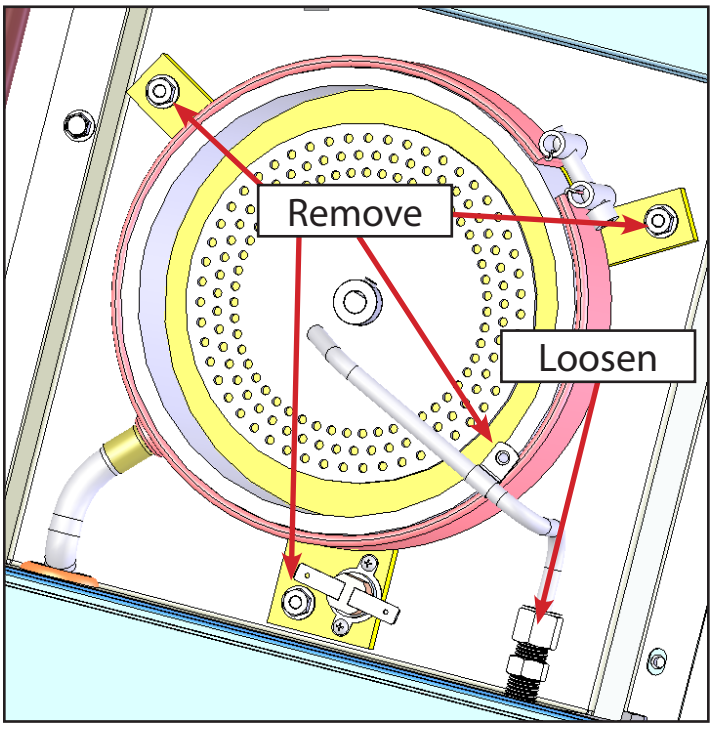
Step 2
Remove all trays and racks form unit.

Step 3
Remove the spilage pan from the bottom of the unit.

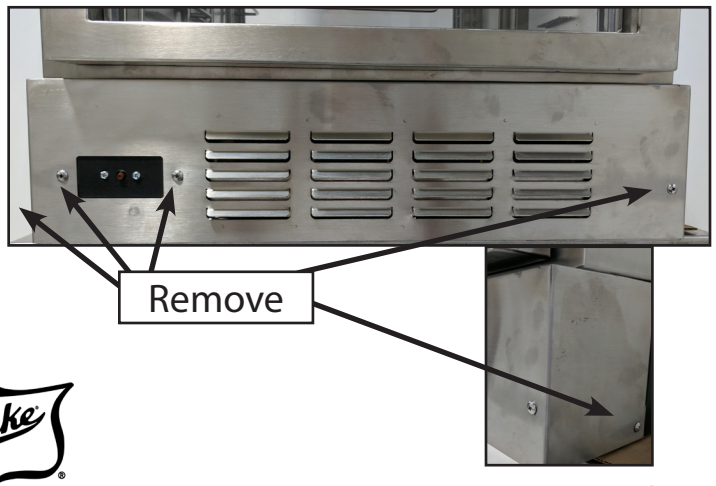


Step 4
Remove cover next to heater by removing the two screws at each end.

Step 5
Using a straight blade screw driver remove the screw holding down the water feed. Then using an 9/16 wrench loosen the fitting at the bulk head. Then move the water tube out of the way. Using an 11/32" nut driver remove the three nuts holding the heater in place.

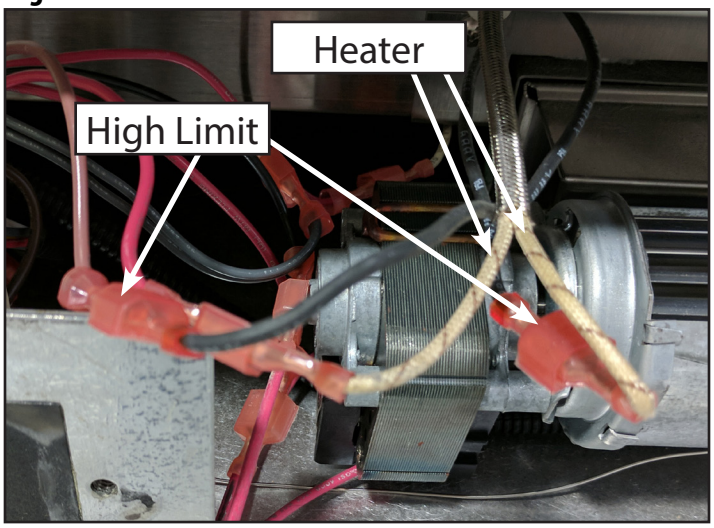


Step 6
Using a phillips screw driver remove the lower back panel where the high limit reset switch is located. One Screw on each side and three on the back.

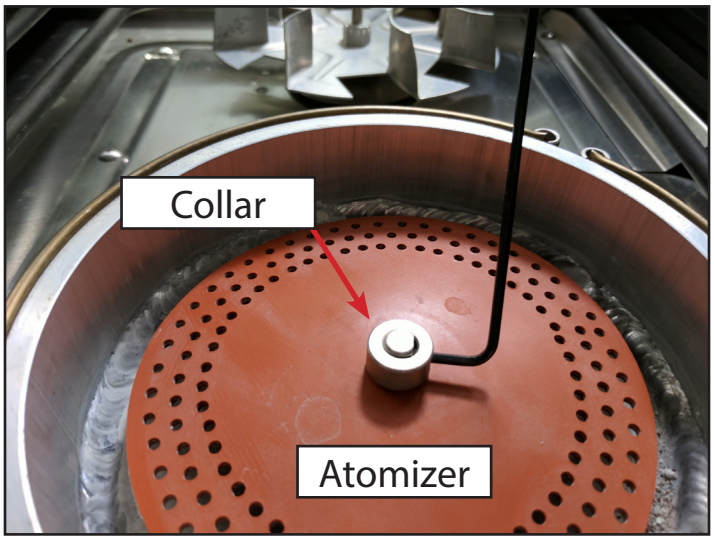


I. Removal of Old Heater - continued

Step 7
Locate the wires for the heater and high limit and disconnect.
Note: One of the heater wires is connected to one of the high limit wires.

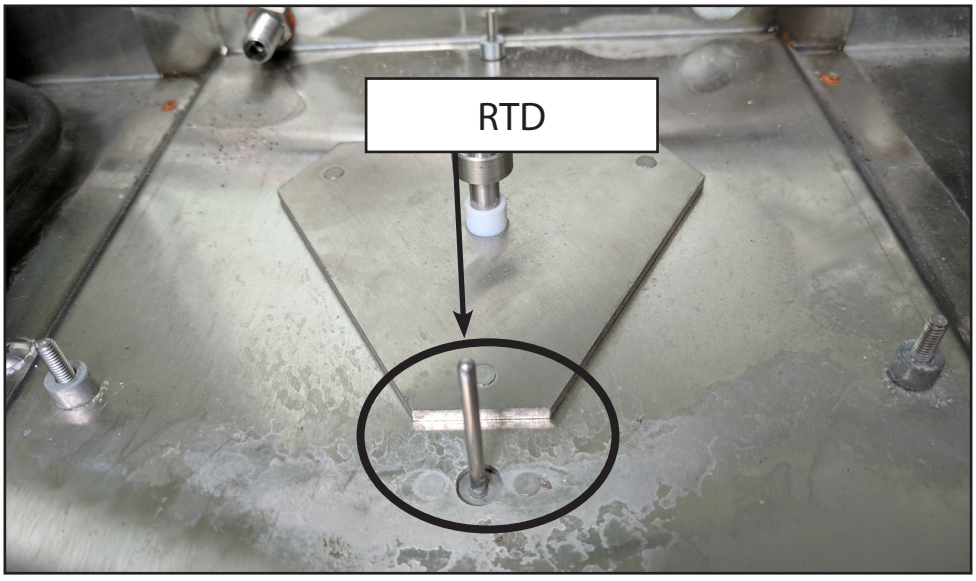


Step 8
Using a 3/32" allen wrench remove the collar holding the atomizer and remove.
Note: Keep Collar and atomizer in safe place for later.



Step 9
Lifting the old heater straight up carefull not to damage the RTD that is inserted into the bottom of the heater.

CAUTION **RTD does not remove with heater.**



Step 10
Pull all the old wiring and old grommet out of unit.

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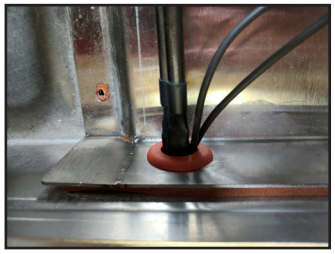
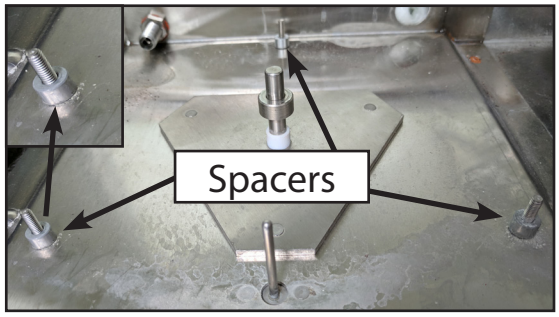
II. Installation of New Cast In Heater

Step 1
Install the new grommet supplied with the kit.

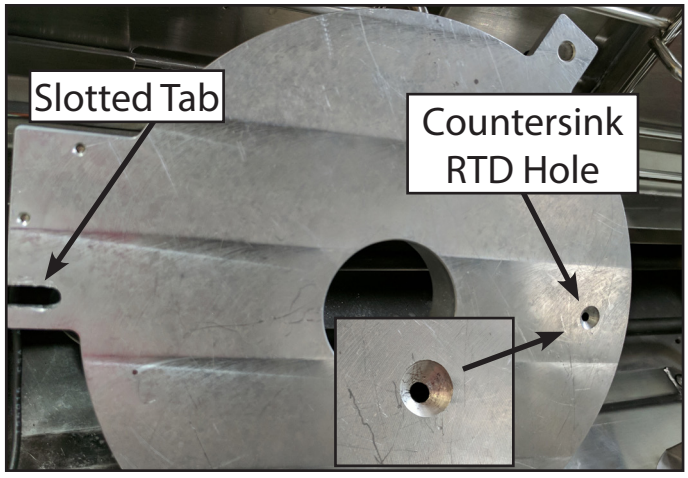
Step 2
Pull wires through the grommet into the fan compartment.



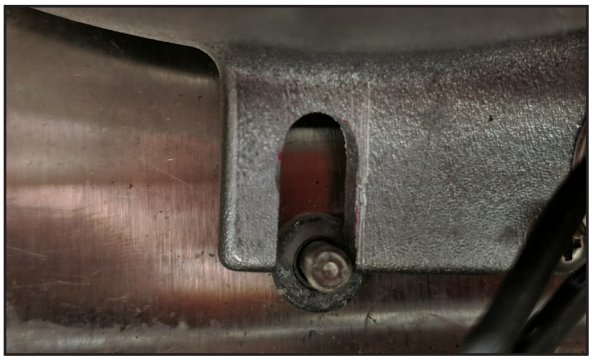
Step 3
Make sure that there are spacers at all three stud locations. **Extras provided in kit if needed.**



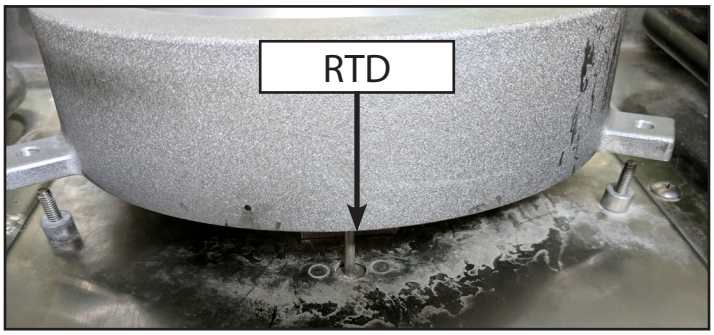
Step 4
Review bottom of new heater. Note the Counter sink hole for RTD and the slotted tab.



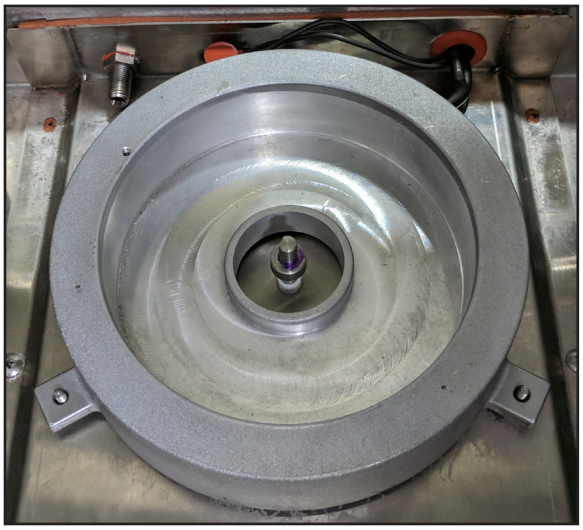
Step 5
Align the slotted tab with the stud closest to the door.



Step 6
Being carefull nut to damage the RTD. slowly lower the heater on to the RTD allowing the RTD to slide into the countersink hole in the heater.



Step 7
Continue to lower the heater onto the studs with the standoffs and secure with:
3-3/32 serrated nuts. **Extras provided in kit if needed.**

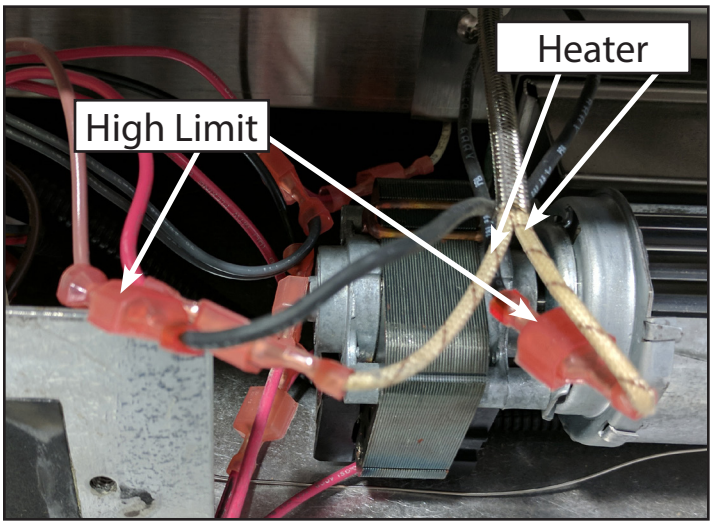


II. Installation of New Cast In Heater - continued

Step 7
Reconnect heater wires in fan compartment:

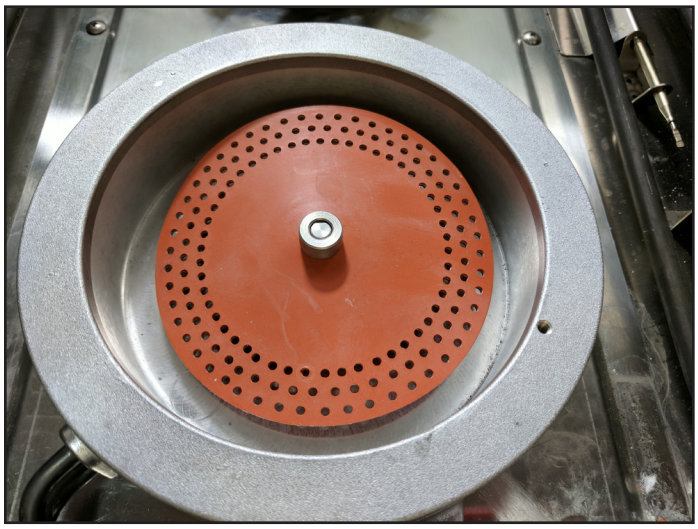
- Connect one Heater wire to one Highlimit wire.
- Connect the other highlimit wire to the Brown wire disconnected in step 7
- Connect the remaining heater element wire to the Red wire disconnected in step 7

Secure wires away from the fan motor.



Step 8
Re-install the fan motor cover, using the five 8-32 X 1/2" bolts removed in step 6.
Extras provided in kit if needed.

Step 9
Install the atomizer using the collar removed in step 8 and tighten with the 3/32" allen wrench.



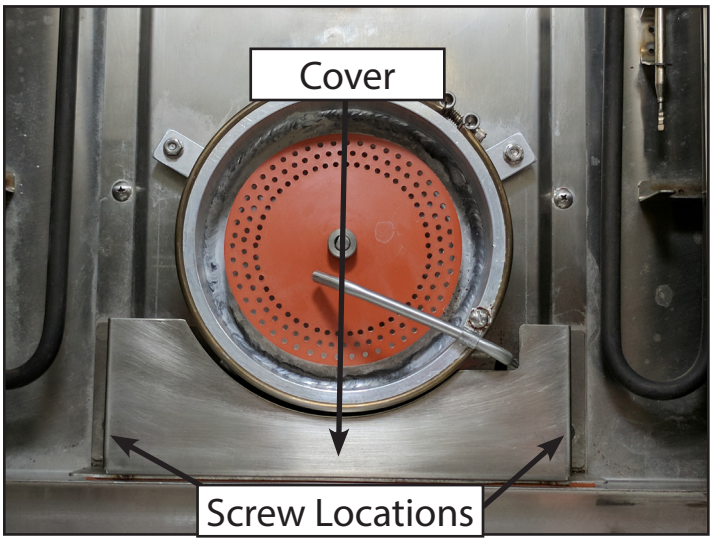
Step 10
Move the water tube back into position and secure with the 8/32X1/4" Screw.
Extra provided in kit if needed.

Step 11
Using a 9/16" wrench tighten the water connection at the bulkhead.

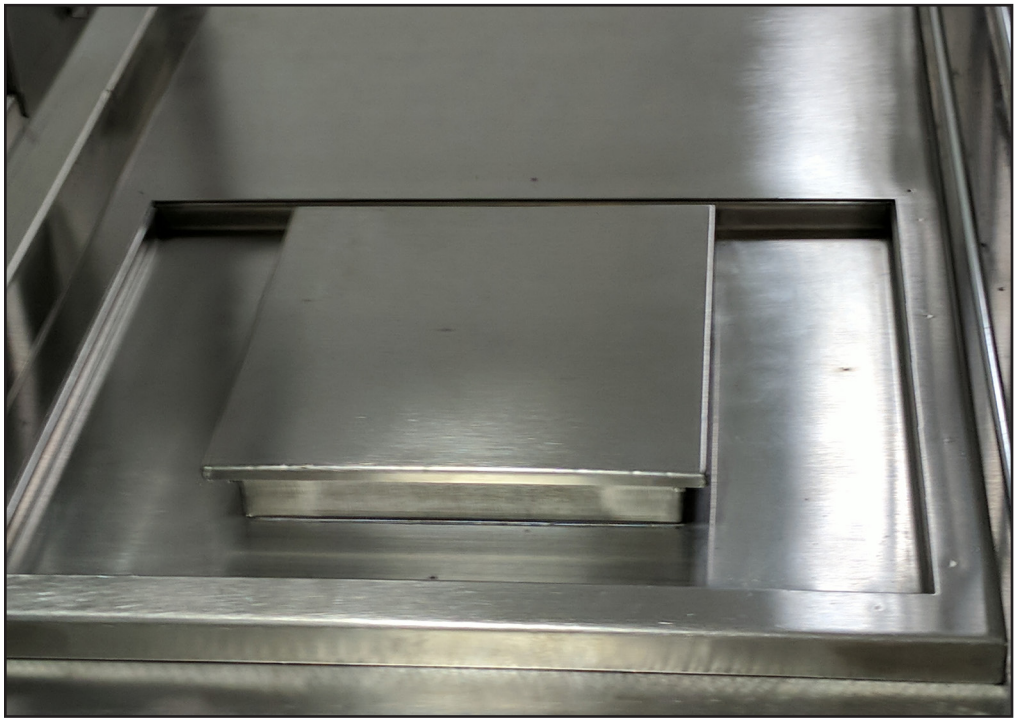
II. Installation of New Cast In Heater - continued

Step 12
Using the silicone in the kit, re-silcione around the elements and the wires going through the grommet to prevent water from the motor area.

Step 13
Install the new cover - Part Number 169995 using two 10/24X3/8" PH Srews.
Note: Extras provided in kit if needed.



Step 14
Put spillage pan back in unit.



Step 15
Put racks and pans back into place.

Step 16
Reconnect power and turn unit on.

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NOTES

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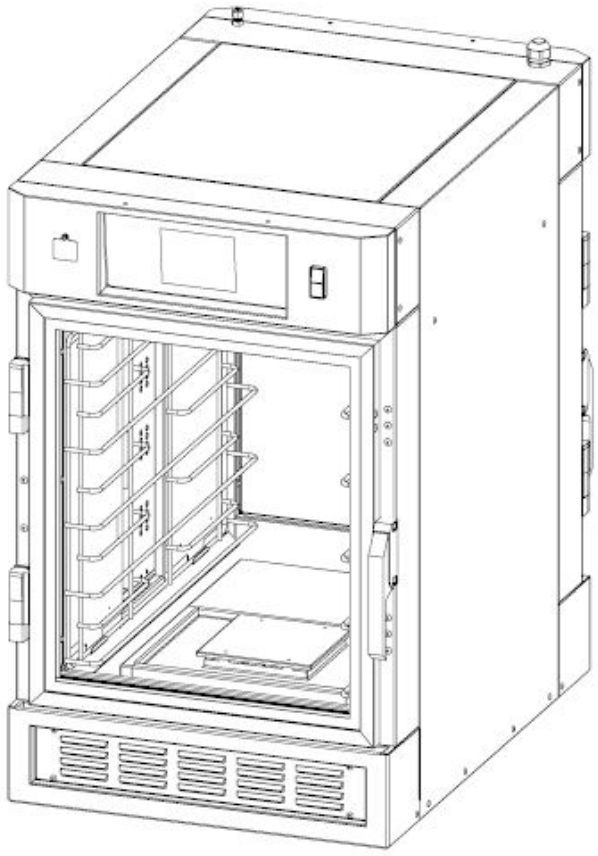
Retrofit Instructions

Flex-Tech

- *Power Cord -Replacement*
- *Sensor Guard - Installation*
- *RH Sensor Service Access Panel - Installation*



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

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CAUTION — **Indicates Important Information**

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Indicates hot surface which, if not avoided, could result in minor or moderate injury.

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SAFETY INSTRUCTIONS - CONTINUED

In addition to the warnings and cautions in this manual, use the following guidelines for safe operation of the unit.

- Read all instructions before using equipment.
- For your safety, the equipment is furnished with a properly grounded cord connector. Do not attempt to remove or disconnect the grounded connector.
- Install or locate the equipment only for its intended use as described in this manual.
- Do not use corrosive chemicals in this equipment.
- Do not operate this equipment if it has a damaged cord or plug, if it is not working properly, or if it has been damaged or dropped.
- This equipment should be serviced by qualified personnel only. Contact the nearest Duke authorized service facility for adjustment or repair.
- Do not block or cover any openings on the unit.
- Do not immerse cord or plug in water.
- Keep cord away from heated surfaces.
- Do not allow cord to hang over edge of table or counter.

The following warnings and cautions appear throughout this manual and should be carefully observed.

- Turn the unit off, disconnect the power source and allow unit to cool down before performing any service or maintenance on the unit.
- The procedures in this manual may include the use of chemical products. You must read the Material Safety Data Sheets before using any of these products.
- The unit should be grounded according to local electrical codes to prevent the possibility of electrical shock. It requires a grounded receptacle with dedicated electrical lines, protected by fuses or circuit breaker of the proper rating, in accordance with all applicable regulations.
- Disposal of the unit must be in accordance with local environmental codes and/or any other applicable codes.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Tools and Parts

Tools needed - Not Included

5/16" Nut Driver

11/32" Nut Driver

.125/3.2mm Drill Bit

.156/4.0mm Drill Bit

Knife or Scrapper

Phillips Screwdriver

Parts - Included

#169818
Power Cord

#169247
Sensor Guard

#169252
RH Sensor Bracket
with gasket

#169998
Gasket

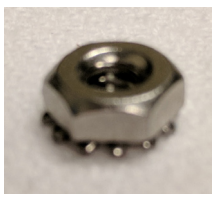
#169447
Drill Template

Side Panel
#169248 - FTU5
or
#169249 - FTU10
#169974 - S/S

#169276
#169253 S/S
Access Panel

#169978
Screw, Thumb
8-32X.500 - 3ea.

#169979
Nut, Thumb
6-32 - 3ea.



#167564
Nut, 6-32 Hex - 3ea

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I. POWER CORD REPLACEMENT

I. Power cord removal

a. Unplug/or disconect unit from main power source.

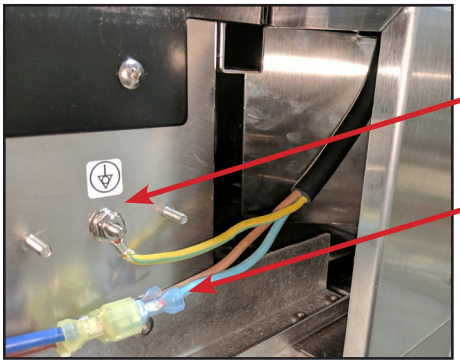
⚠WARNING

Electrical shock hazard present if above step is not completed. Could result in death or serious injury and/or equipment damage.

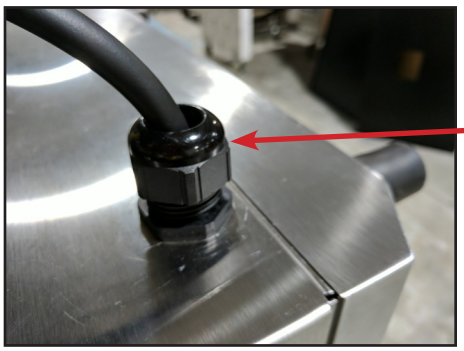
b. Viewing the unit from the front control side remove the right side panel removing the screws.

FTU 5 - 6 Screws FTU-10 - 10 Screws

c. Disconnect the two main power line connectors. Using a nut driver remove the nut holding the ground wire.

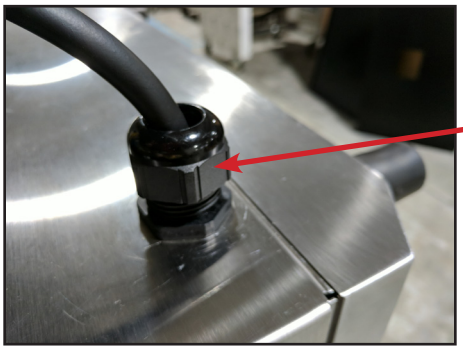


d. Loosen the top of the strain relief and pull the power cord out from the top.



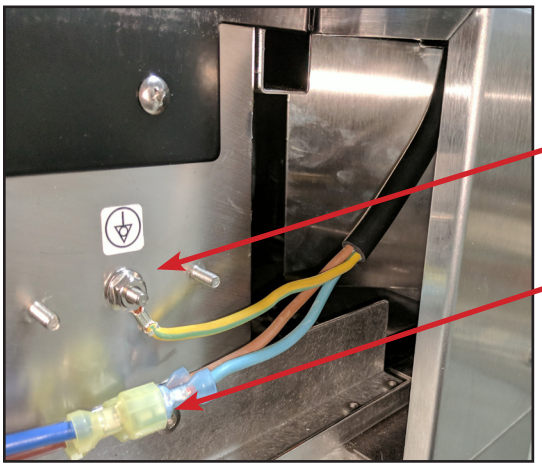
II. Power cord installation

a. Take new power cord and feed connection end down through strain relief making sure enough line is available to reconnect to the unit then tighten securely.



b. Using the nut driver secure the ground wire to the grounding lug make sure nut is tightened properly. Reconnect the two power lines.

Note: Torque ground connector to 20-28 in-lbs. Do NOT over torque.



c. Replace side panel and secure with screws removed in step 2

Note: Do not plug in unit until all components have been completed.

SENSOR GUARD INSTALLATION

I. Sensor Removal

a. Unplug/or disconect unit from main power source.

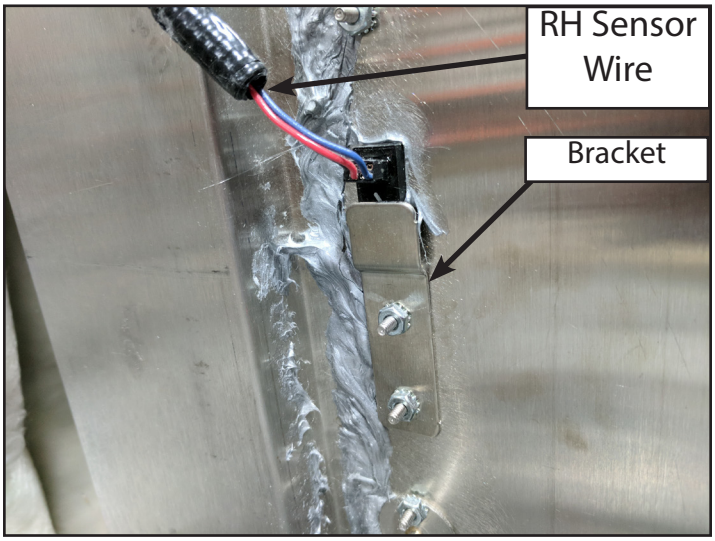
⚠WARNING

Electrical shock hazard present if above step is not completed. Could result in death or serious injury and/or equipment damage.

b. Remove all trays and the wire rack on the sensor side from inside the unit.
Note: Vewing from the front control remove frome the left side.

c. Viewing the unit from the front control side remove the left side panel removing the screws.
FTU 5 - 6 Screws FTU-10 - 10 Screws
Move all insulation out of the way by flipping on top or tucking in at the sides.

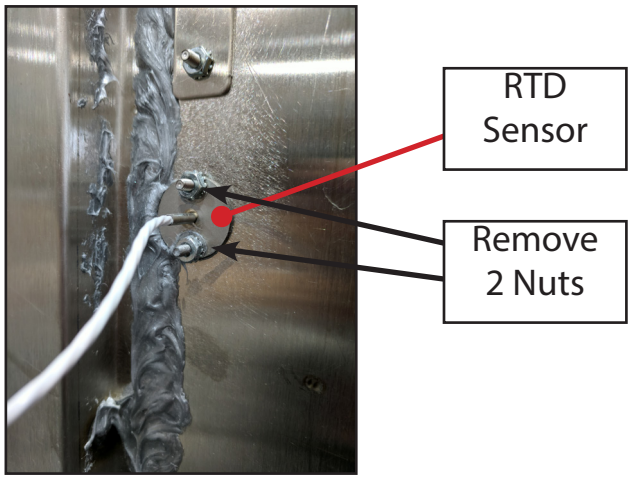
d. From the side of the unit remove the RH sensor wire.

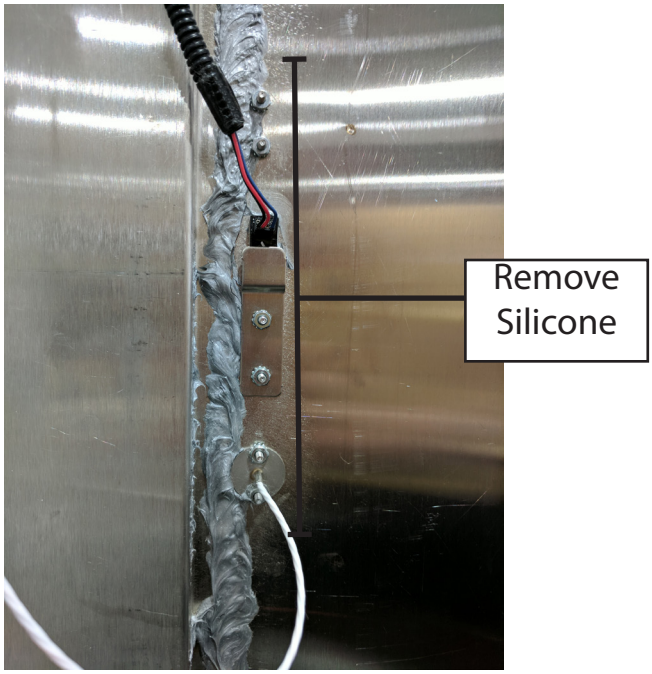


e. Remove the bracket holding the RH Sensor in place by removing the 2 nuts & cutting the silicone freeing the RH Sensor. Remove sensor **and set aside**.
Note: Do not bend or touch the wire prongs on the sensor.

I. Sensor Removal - continued

f. Remove the RTD by removing the 2 nuts. Remove all silicone using knife.

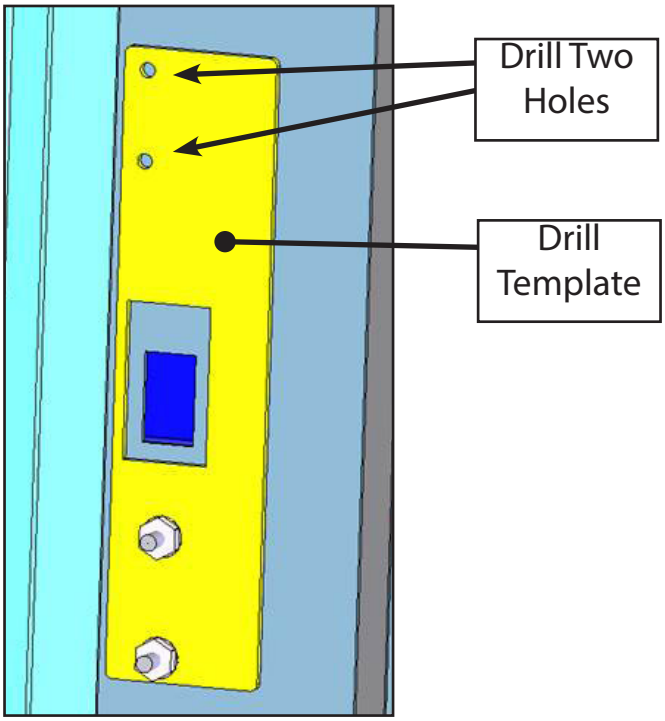




Note: It is important to remove all silcone from unit and sensor from the RTD sensor up to above the two pem studs above the sensor..

II. SENSOR GUARD INSTALLATION - CONTINUED

a. Place Template (Part # 169447) with Vinyl (Shiny) side up using existing Pem Studs and use the 2 nuts to hold the template. Ensure to hold Template straight and bias toward the front. Ensure 2 nuts are properly tight. **NOTE: Outside food cavity**

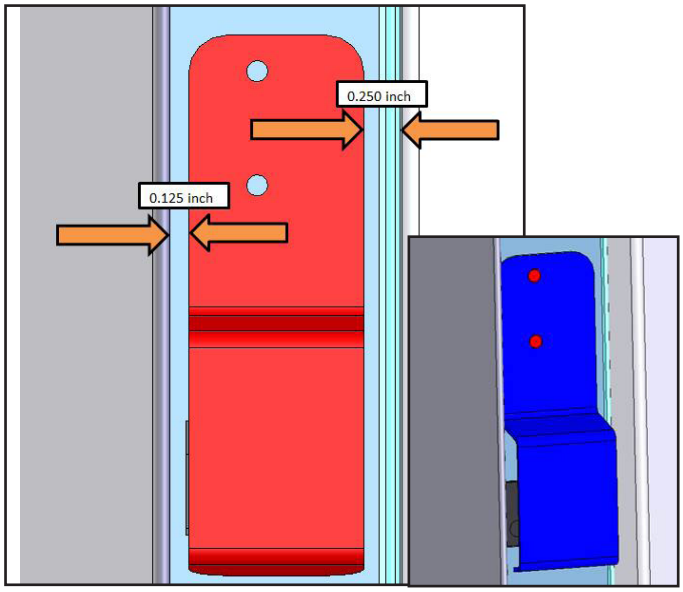


b. Drill two holes while the template is still installed to avoid drill travel using 0.125 inch (3.2 millimeters) **Note: Drill not included in kit.**

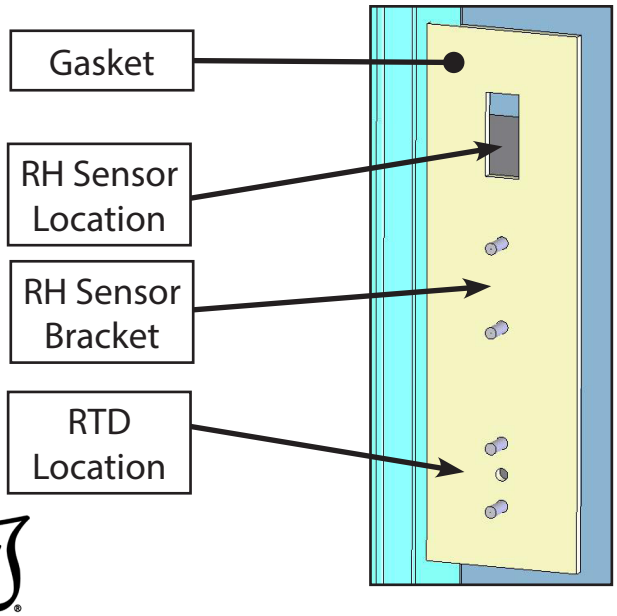
c. Then remove template and drill to final hole size of 0.156 inch (4.0 millimeters) for both holes. **Note: Drill not included in kit.**

d. **Remove any burrs from the holes and clean debris during drilling from inside & outside of the unit.**

e. Using holes previously drilled, install the RH Sensor Guard with Pem Studs already installed (Part # 169247) **from inside the unit** and place two #6 nuts (Part # 167564) provided **on the outside.** Bias the RH Sensor Guard towards the front and ensure it is installed straight with 0.125 inch (3.18 millimeters) gap on front & 0.250 inch (6.35 millimeters) gap on rear.



f. Place the adhesive backed Gasket (P/N 169797) around the RH Sensor cutout and over the Pem Studs as shown. (sticky side to unit)
Note: Before applying gasket clean metal surface area with alchol after removing all silicone.



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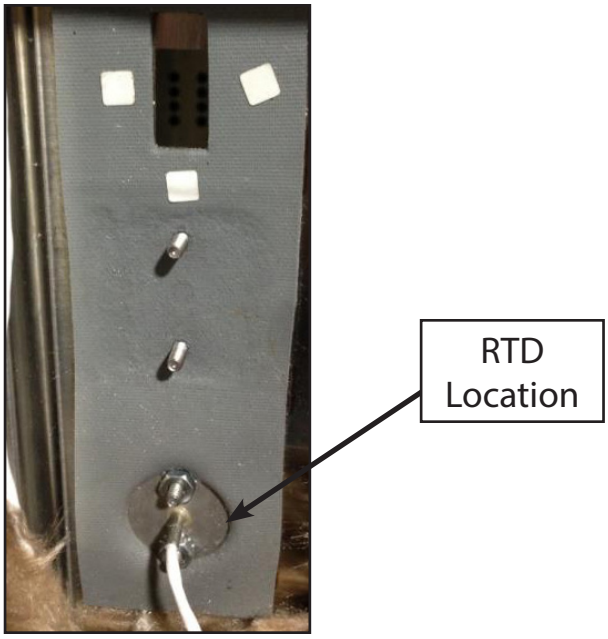
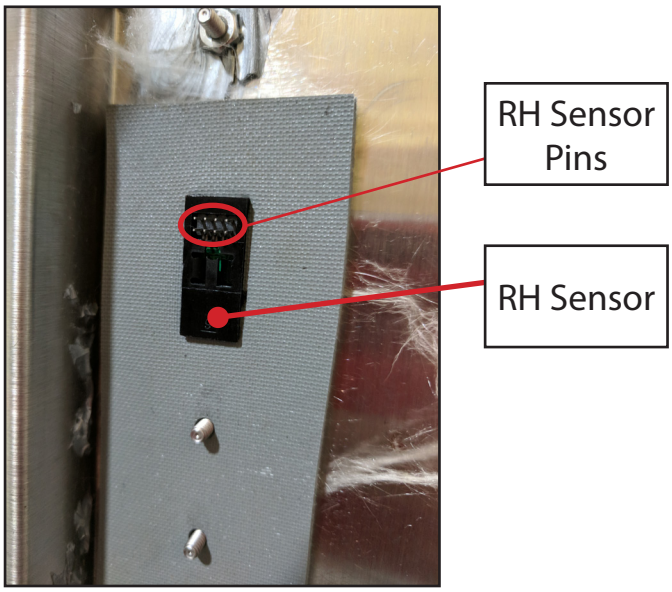
II. SENSOR GUARD INSTALLATION - CONTINUED

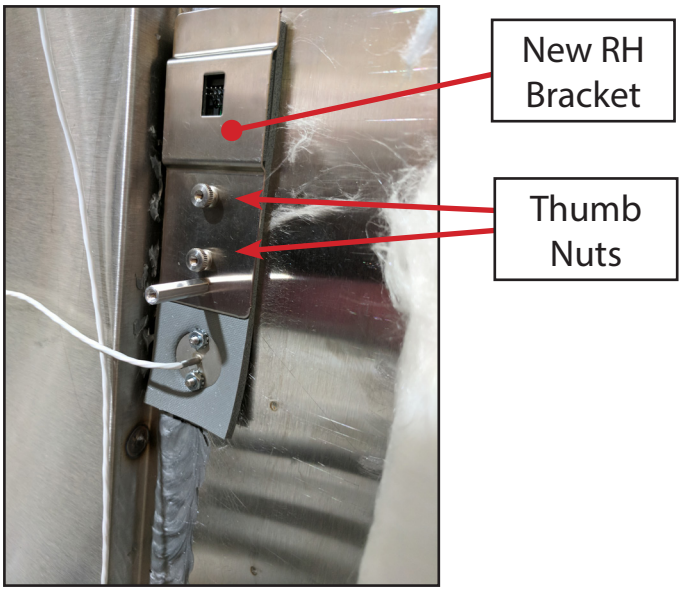
g. Place the RTD using the same 2 nuts.



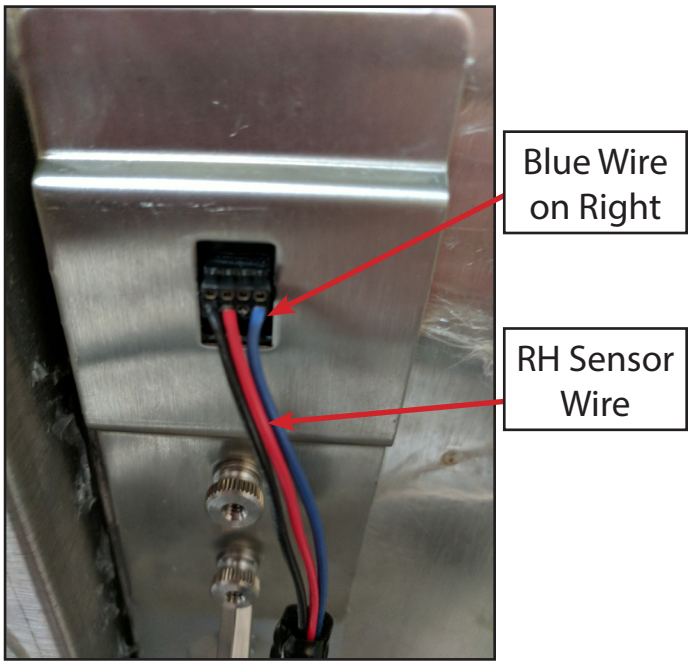
h. Using ESD process, replace RH Sensor (P/N 169669) thru the cutouts of the Gasket and Cavity. Ensure the RH Sensor is pressed all the way and shows up flush on the inside of cavity.
Note: Pins should be at the top.



i. Install the Bracket (P/N 169252) using the two Thumb Nuts (P/N 169979) as shown below. Ensure that the thumb nuts are properly tightened by hand.



j. Re-connect the RH Sensor harness with connector wires toward the center of the RH Sensor as shown below.
Note: Blue wire is on the right.



II. Sensor Guard Installation - continued

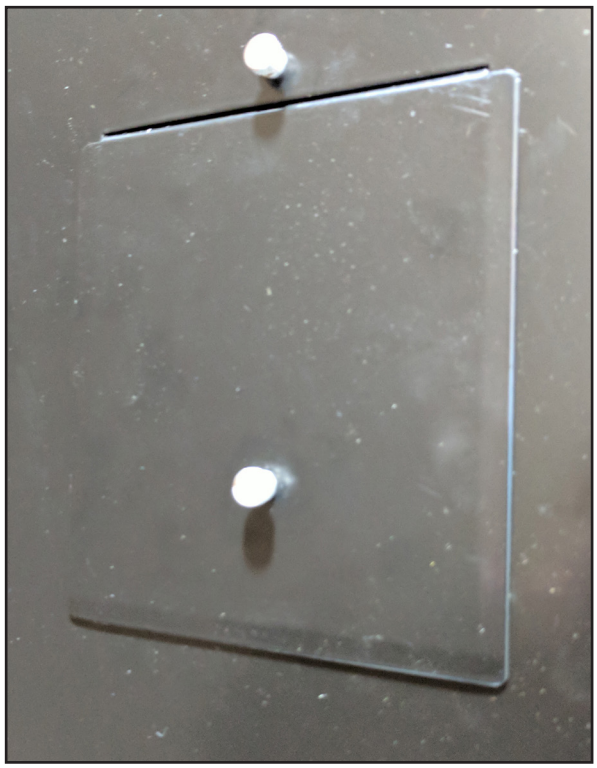
k. Move the insulation back over the side as before. Then cut out the insulation around the RH Sensor with cutout 6 inches high and 5 inches wide to provide access to the RH Sensor.

Note: Make sure all insulation has been put back in place and all wires are secured as not to be pinched.

III Service Access Panel Installation

a. Using the screws from the original panel, install the new Side Cover with cutout. The correct Side Cover with cutout should already be included with the Service Kit.
P/N 169248 for Regular FT-5
P/N 169249 for Regular FT-10
P/N 169974 for VAVE FT-10)

b. Attach the Service Access Panel (P/N 169253) using two Thumb Screws (P/N 169978) as shown below. Ensure that the thumb screws are properly tightened. Ensure that no wires get pinched when installing the Service Access Panel.



c. Plug in unit and re-start. Enter the current RH Sensor Offset value in main Controller. Ensure unit is operating properly and reaches & maintains the desired setpoints.

IV. CLEANING AND CARE

a. Ensure that during cleaning operation, degreaser or other cleaning fluids are not directly sprayed into the unit to avoid getting into the RH Sensor which might affect sensor performance.

b. Apply degreaser or cleaning fluid to a cleaning cloth before wiping / cleaning the unit but avoid wiping over the RH Sensor.

V. NOTES

Your Solutions Partner

Duke Manufacturing Co.

2305 N. Broadway
St. Louis, MO 63102
Phone: 314-231-1130
Toll Free: 1-800-735-3853
Fax: 314-231-5074

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Installation Instructions

Flex-Tech

- *RH Sensor Replacement Kit 600483*

Parts - Included`

RH Sensor 1ea.

RH Sensor Offset Value
_____

Label 1ea.

No tools Required

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

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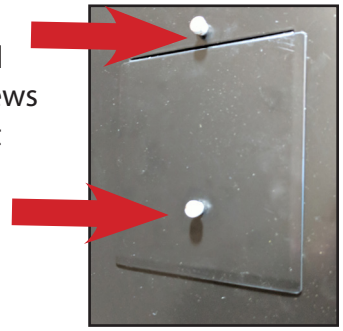
P/N 169989
REV A Date 09/15/2017

RH Sensor Replacement

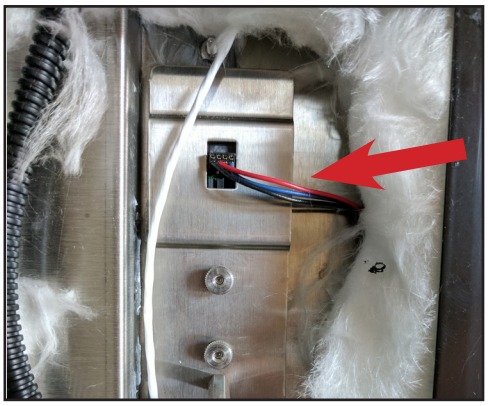
I. SENSOR REMOVAL

Step 1
Make sure unit is turned off and disconnected.
CAUTION: Failure to make sure unit is off and discontected could result in bodily harm or equipment failure.

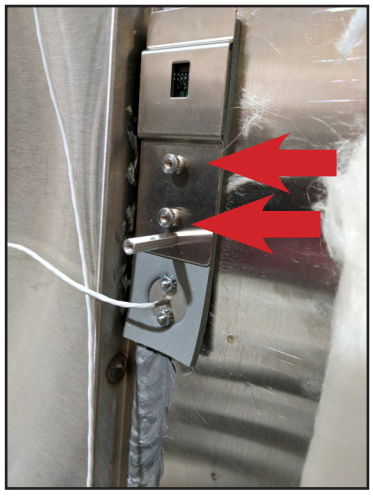
Step 2
Remove side access panel by removeing thumb screws from access panel and set aside.



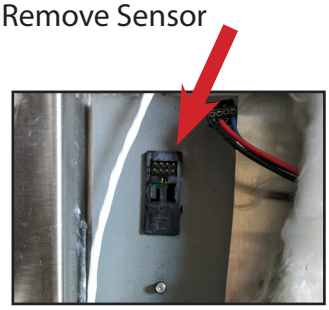
Step 3
Disconnect the wire harness from the RH Sensor.

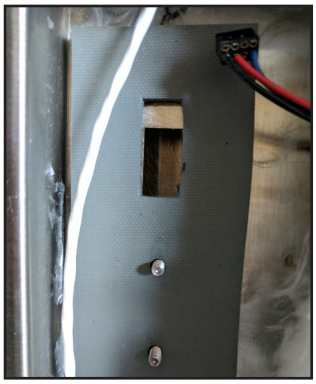


Step 4
Remove the sensor bracket by removeing the two thumb nuts.



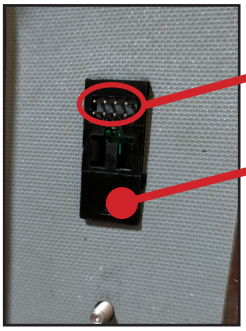
Step 5
Remove Sensor





II. SENSOR INSTALLATION

Step 1
Using ESD process, place RH Sensor thru the cutouts of the Gasket and Cavity. Ensure the RH Sensor is pressed all the way and shows up flush on the inside of cavity.
Note: Pins should be at the top.

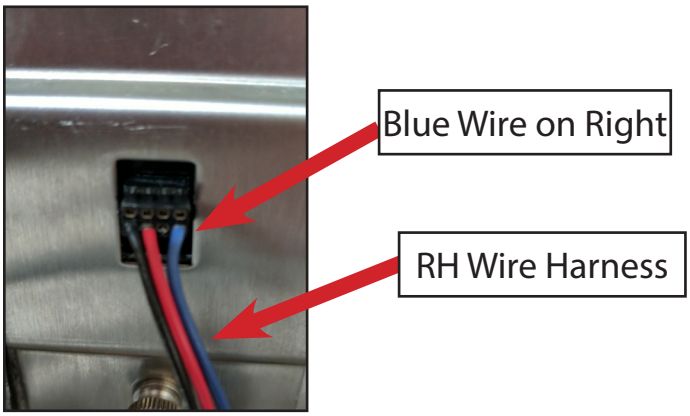


Step 2
Install the RH Bracket using the two Thumb Nuts as shown below. Ensure that the thumb nuts are properly tightened by hand.

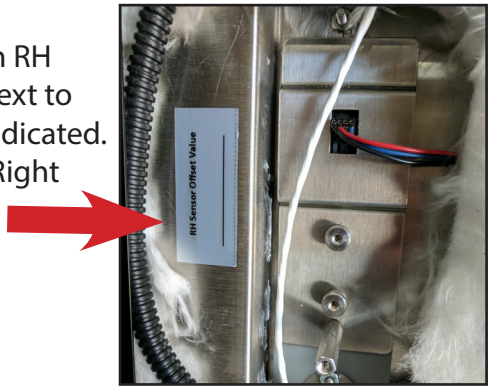
Your Solutions Partner

RH Sensor Replacement - continued

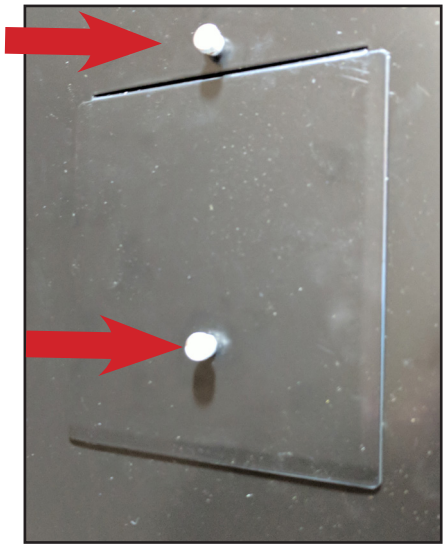
Step 3
Connect the RH Sensor harness with the RH Sensor.
Note: Blue wire is on the right.



Step 4
Place label with RH Sensor offset next to RH Sensor as indicated. See Picture to Right



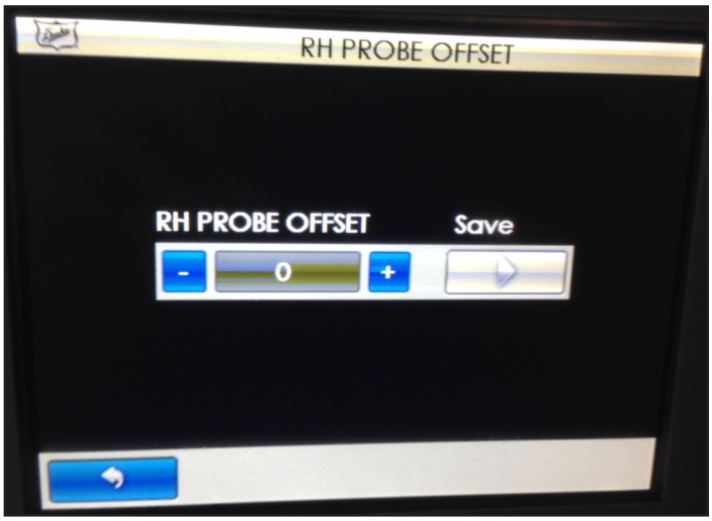
Step 5
Attach the Service Access Panel using two Thumb Screws.
Note: That the thumb screws are properly tightened.
Note: That no wires are pinched when installing the Service Access Panel.



III. CONTROLLER UPDATE

Step 1
Plug in and re-start unit.

Step 2
In the main Controller go to Tools and enter password 4567 and then RH Probe Offset.



Step 3
Enter the RH Probe Offset value that was on the label by either clicking plus or minus sign. Touch Save. Then go back to main screen and Touch User > System Status. Ensure unit is operating properly and reaches & maintains the desired setpoints.

IV. CLEANING AND CARE

1.
Ensure that during cleaning operation, degreaser or other cleaning fluids are not directly sprayed into the unit to avoid getting into the RH Sensor which might affect sensor performance.

2.
Degreaser or cleaning fluid can be applied to a cleaning cloth before wiping / cleaning the unit but avoid wiping over the RH Sensor.

V. NOTES

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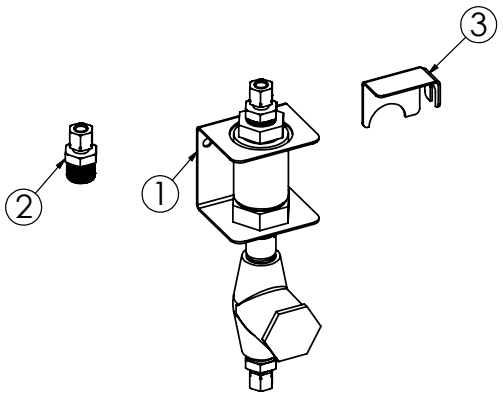
INSTALLATION INSTRUCTIONS

REVERSE OSMOSIS SYSTEM BACKFLOW PREVENTER ASSEMBLY INSTRUCTIONS FOR DUKE KIT# 600398



ITEM NO.	PART NUMBER	DESCRIPTION	600398/QTY.
1	512602	ASM., BACKFLOW VALVE	1
2	512421	FITTING, BRASS, COMP., 1/4 TUBE X 3/8 NPT	1
3	512422	ANGLE, LOCKING, BACK FLOW VALVE	1

Items required for this installation:

- Cross Tip screw driver
- 11/16” Open End or Line Wrench
- 1/2” Open End or Line Wrench

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P/N 169519A
05/27/2014

Technical Description and Application Notes

Check with your local authority having jurisdiction regarding approvals for connecting the Duke Reverse Osmosis System to a potable water supply before making any plumbing connections. Plumbing code requirements vary, but Duke has made a kit available to add a backflow prevention device to protect water supply systems by preventing the reverse flow of non-potable water into the potable water system. The device consists of two independently acting check valves, internally force-loaded to a normally closed position and designed/constructed to operate under intermittent or continuous pressure conditions.

The two main components of the Duke backflow preventer system are:

1. Dual Check Valve type backflow preventer that conforms to ANSI/ASSE standard #1024 and is CSA standard B64.6 certified.
2. Inlet water strainer equipped with 100-mesh screen and installed up stream of the backflow preventer. The screen is conveniently located on the rear panel of the proofer, below the backflow preventer, for easy access during cleaning/replacement.

NOTE: Some municipalities require annual inspection of backflow preventer devices and/or cleaning of inlet strainers. Check with your local authority having jurisdiction for these or any additional regulations.

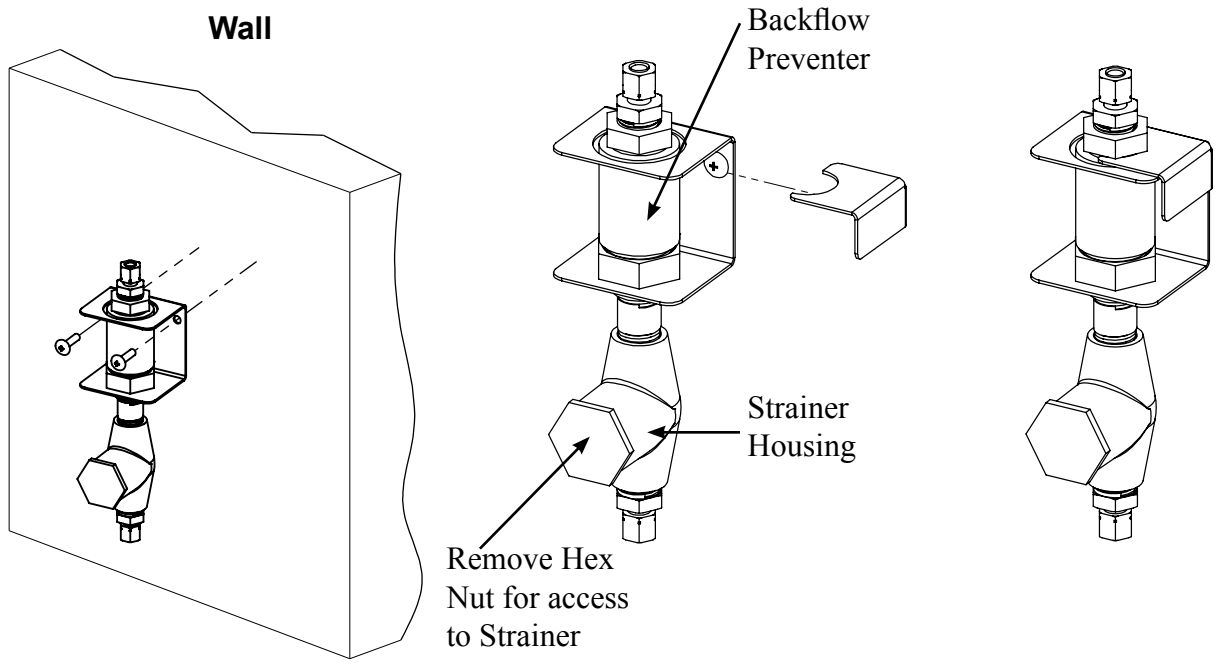
1. Turn unit power off with Main Switch and turn off external mains supply disconnect.

⚠WARNING ⚠

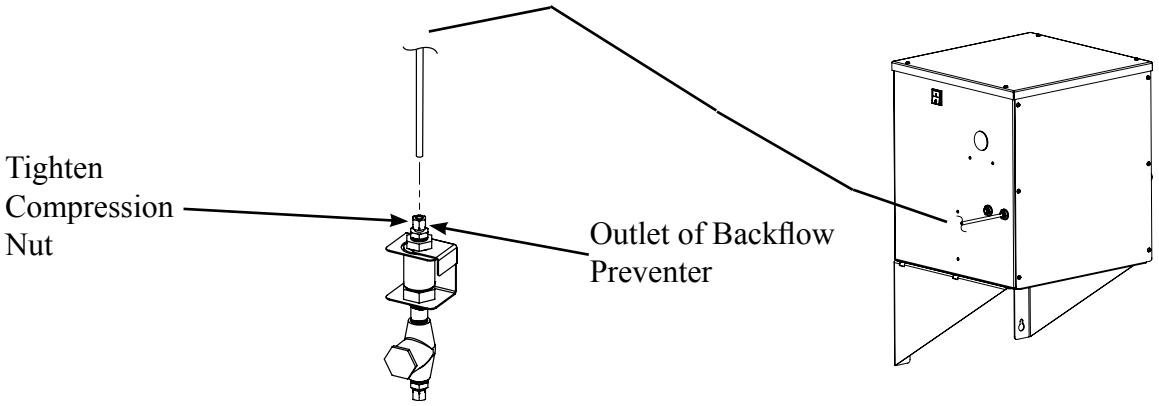
ELECTRICAL SHOCK HAZARD.

TASKS MUST BE PERFORMED BY A QUALIFIED SERVICE TECHNICIAN OR ELECTRICIAN.

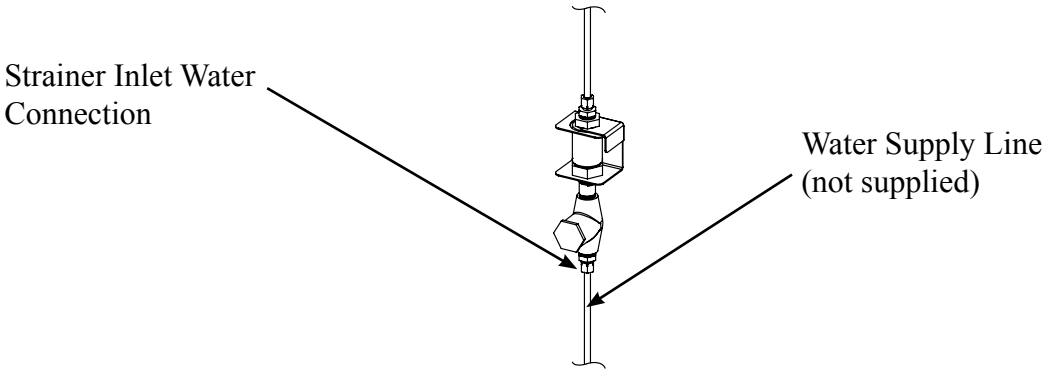
2. Turn off water supply.
3. Select a location for the Backflow Preventer between the mains water supply and the RO System that is clear of electrical wiring or water piping which may be in the path of a drilling tool when mounting with bracket.
4. Install Backflow Preventer Assembly with strainer down using bracket provided, as shown below.



5. Connect tube between Backflow Preventer and RO System inlet. Tighten compression nut on Backflow Preventer.



6. Attach water supply line to bottom of Strainer. Tighten compression nut at water line fitting.



7. Turn water supply on and check for water leaks at all connection fittings.
8. Turn unit power on at external mains supply disconnect and turn on Main Switch.

⚠WARNING

ELECTRICAL SHOCK HAZARD.

TASKS MUST BE PERFORMED BY A QUALIFIED SERVICE TECHNICIAN OR ELECTRICIAN.

Your Solutions Partner

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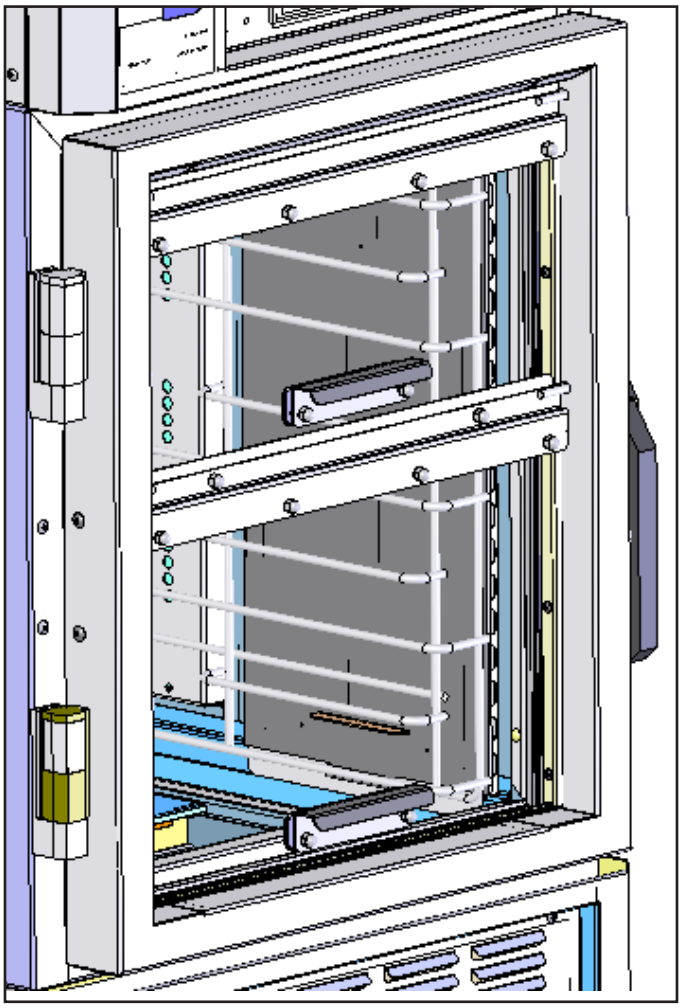
Installation Instructions

Flex-Tech Hinge Plate and Bushing Replacement

FTU-5 - Kit 600496
FTU-10 - Kit 600497



CAUTION: Please read these instructions completely before attempting to service this equipment

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P/N 169592
REV A Date 11/02/2017

Tool - Required - Not included

Phillips Screw Driver

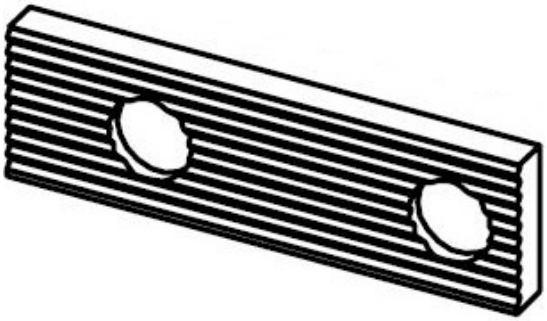
Straight Blade Screw Driver

Large Channel Locks

11mm Drill Bit

Cordless Drill

Parts In Kit



169763 Longer Hinge Plate

Kit 600496	**4 Each**
Kit 600497	**8 Each**

16999 Loctite

1 Each

169765 Bushing

Kit 600496	**4 Each**
Kit 600497	**8 Each**

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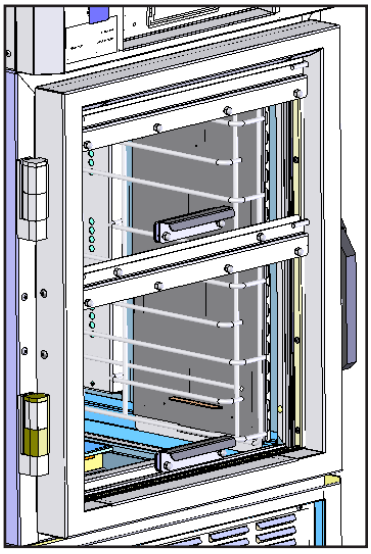
I. Removal of Old Hinge Plate and Bushing

⚠ CAUTION

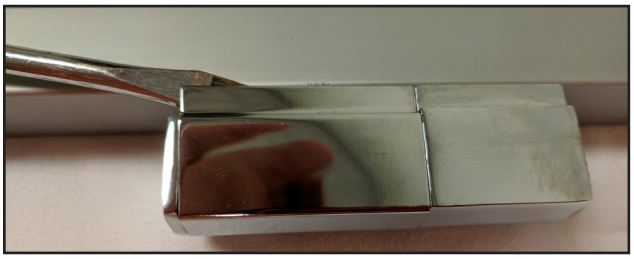
Step 1
Turn power switch to off and disconnect from power source.



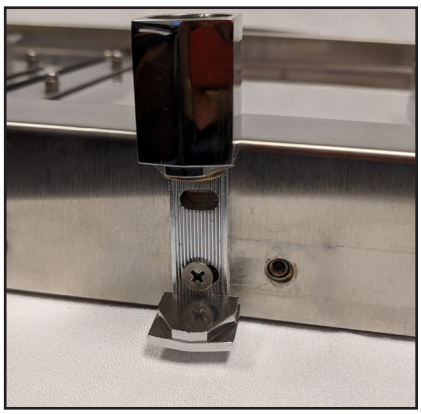
Step 2
Remove door from unit by, opening past 90 and lift straight up with both hands.

⚠ CAUTION
If not held securly door could fall and cause bodily indury and or damage.

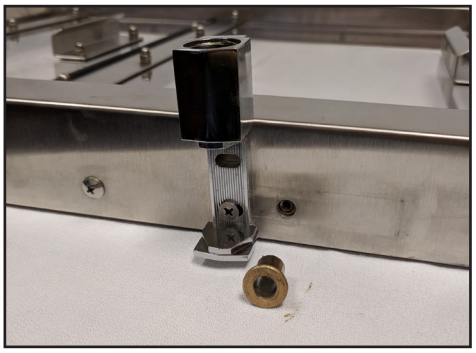
Step 3
Lay door on a flat surface. Being carfull not to scratch the hinge cover pull off the hinge cover. **Note: the outer edge may need lifted by a straight blade screw driver.**



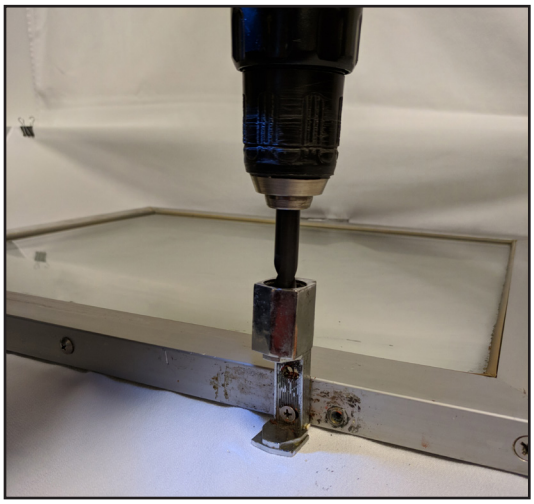
Step 4
Remove the two screws from the hinge and remove the hinge plate. Reattach the hinge with one screw and rotate the hinge so that the hinge is purpendicular to the door and retighten the screw.
See picture below.



Step 5
Using a straight blade screw driver remove the copper bushing from the hinge.



Step 6
Using an 11mm drill bit drill out the center of the hinge.



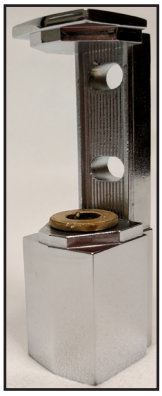
Step 7
Remove hinge by removeing the screw.
Note: Do not discard the screws they will be needed to remount the hinge.

Step 8
Repeat steps 3-7 for all other hinges.

II. Installing New Hinge Plate and Bushing

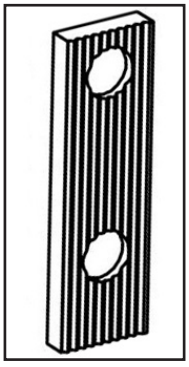
Step 1
Insert a new bushing in the hinge. Make sure it is fully seated.
Note: The bushing will be tight and may require the use of channel locks to help press the bushing into place.

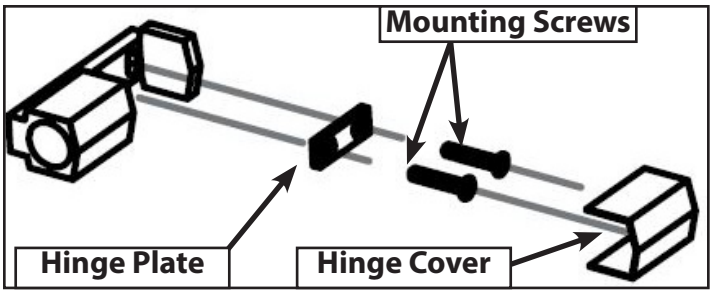
169765 Bushing



Step 2
Take two screws and apply loctite along the treads of the screws.

Step 3
Using the new mounting plate from the kit re-mount hinge on door, serated side against hinge.
Note: New hinge plate is not symetrical. The hole at one end is offset from the end more than the other. The longer end should be mounted just above the new bushing.





Step 4
Re-install the hinge covers.

Step 5
Repeat steps 1-4 for other hinge.

Step 6
Install the door on the unit and make any adjustments needed to make sure door opens and closes properly.

Step 7
Connect all power and turn power switch on.

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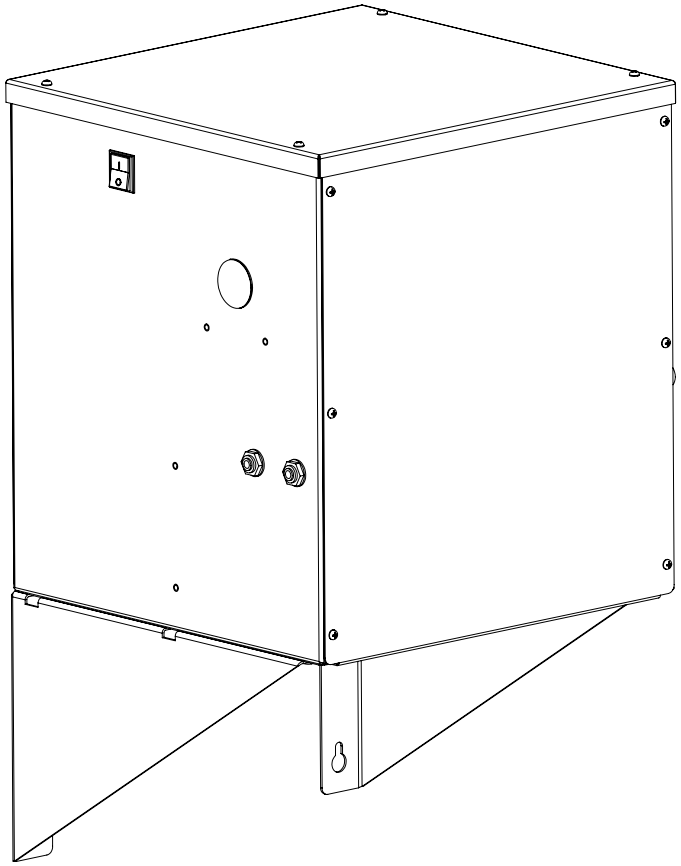
OWNER'S MANUAL

REVERSE OSMOSIS WATER FILTRATION SYSTEM

Model:
RO



IMPORTANT INFORMATION, READ BEFORE USE.
PLEASE SAVE THESE INSTRUCTIONS.

Duke Manufacturing Company

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P/N 169511B
10/29/2014

TABLE OF CONTENTS

IMPORTANT SAFETY INSTRUCTIONS

Throughout this manual, you will find the following safety words and symbols that signify important safety issues with regards to operating or maintaining the equipment.

⚠WARNING **Indicates a hazardous situation which, if not avoided, could result in death or serious injury.**

⚠ CAUTION **Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.**

CAUTION **Indicates Important Information**

 **Indicates electrical shock hazard which, if not avoided, could result in death or serious injury and/or equipment damage.**

ELECTRICAL WARNINGS

THIS MANUAL HAS BEEN PREPARED FOR PERSONNEL QUALIFIED TO INSTALL ELECTRICAL EQUIPMENT, WHO SHOULD PERFORM THE INITIAL FIELD STARTUP AND ADJUSTMENTS OF THE EQUIPMENT COVERED BY THIS MANUAL.

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

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

⚠WARNING IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH.

⚠WARNING (US/CAN ONLY) ELECTRICAL CONNECTIONS SHOULD BE PERFORMED ONLY BY A CERTIFIED PROFESSIONAL.

⚠WARNING ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH THE APPLICABLE PORTIONS OF THE NATIONAL ELECTRIC CODE AND/OR ALL LOCAL ELECTRIC CODES. FAILURE TO COMPLY WITH THIS PROCEDURE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH.

⚠WARNING BEFORE CONNECTING THE UNIT TO THE ELECTRICAL SUPPLY, VERIFY THAT THE ELECTRICAL AND GROUNDING CONNECTIONS COMPLY WITH THE APPLICABLE PORTIONS OF THE NATIONAL ELECTRIC CODE AND/OR OTHER LOCAL ELECTRICAL CODES. FAILURE TO COMPLY WITH THIS PROCEDURE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH.

⚠WARNING BEFORE CONNECTING THE UNIT TO THE ELECTRICAL SUPPLY, VERIFY THAT THE ELECTRICAL CONNECTION AGREES WITH THE SPECIFICATIONS ON THE DATA PLATE. FAILURE TO COMPLY WITH THIS PROCEDURE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH.

⚠WARNING UL73 GROUNDING INSTRUCTIONS: THIS APPLIANCE MUST BE CONNECTED TO A GROUNDED, METAL, PERMANENT WIRING SYSTEM. OR AN EQUIPMENT-GROUNDING CONDUCTOR MUST BE RUN WITH THE CIRCUIT CONDUCTORS AND CONNECTED TO THE EQUIPMENT-GROUNDING TERMINAL OR LEAD ON THE APPLIANCE. FAILURE TO COMPLY WITH THIS PROCEDURE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH.

⚠WARNING APPLIANCES EQUIPPED WITH A FLEXIBLE ELECTRIC SUPPLY CORD, ARE PROVIDED WITH A THREE-PRONG GROUNDING PLUG (OR A CEE7 PLUG FOR INTERNATIONAL CE UNITS). IT IS IMPERATIVE THAT THIS PLUG BE CONNECTED INTO A PROPERLY GROUNDED RECEPTACLE. FAILURE TO COMPLY WITH THIS PROCEDURE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH.

⚠WARNING IF THE RECEPTACLE IS NOT THE PROPER GROUNDING TYPE, CONTACT AN ELECTRICIAN. DO NOT REMOVE THE GROUNDING PRONG FROM THE PLUG. FAILURE TO COMPLY WITH THIS PROCEDURE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH.

⚠WARNING BEFORE PERFORMING ANY SERVICE THAT INVOLVES ELECTRICAL CONNECTION OR DISCONNECTION AND/OR EXPOSURE TO ELECTRICAL COMPONENTS, ALWAYS PERFORM THE ELECTRICAL LOCKOUT/ TAGOUT PROCEDURE. DISCONNECT ALL CIRCUITS. FAILURE TO COMPLY WITH THIS PROCEDURE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH.

⚠WARNING BEFORE REMOVING ANY ACCESS PANELS OR SERVICING THIS EQUIPMENT, ALWAYS PERFORM THE ELECTRICAL LOCKOUT/TAGOUT PROCEDURE. BE SURE ALL CIRCUITS ARE DISCONNECTED. FAILURE TO COMPLY WITH THIS PROCEDURE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH.

⚠WARNING DO NOT OPERATE THIS EQUIPMENT WITHOUT PROPERLY PLACING AND SECURING ALL COVERS AND ACCESS PANELS. FAILURE TO COMPLY WITH THIS PROCEDURE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH.

⚠WARNING FOR YOUR SAFETY, DO NOT USE OR STORE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE. FAILURE TO COMPLY CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH.

⚠WARNING IN THE EVENT OF A POWER FAILURE, DO NOT ATTEMPT TO OPERATE THIS APPLIANCE. FAILURE TO COMPLY CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH.

⚠WARNING DO NOT INSTALL NEAR ELECTRICAL WIRING OR PIPING WHICH MAY BE IN PATH OF A DRILLING TOOL WHEN SELECTING THE POSITION TO MOUNTING THE FILTER BRACKET.

⚠WARNING DEPRESSURIZE SYSTEM AS SHOWN IN MANUAL PRIOR TO CARTRIDGE REMOVAL/REPLACEMENT. FAILURE TO COMPLY CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH.

CAUTION PROTECT FROM FREEZING, REMOVE CARTRIDGE WHEN TEMPERATURES ARE EXPECTED TO DROP BELOW 40° F (4.4° C);

CAUTION DO NOT INSTALL ON HOT WATER SUPPLY LINES. THE MAXIMUM OPERATING WATER TEMPERATURE OF THIS FILTER SYSTEM IS 100°F (37.8°C).

CAUTION DO NOT INSTALL IF WATER PRESSURE EXCEEDS 100 PSI (690 KPA). IF YOUR WATER PRESSURE EXCEEDS 80 PSI (552 KPA) YOU MUST INSTALL A PRESSURE LIMITING VALVE. CONTACT A PLUMBING PROFESSIONAL IF YOU ARE UNCERTAIN HOW TO CHECK YOUR WATER PRESSURE.

CAUTION DO NOT INSTALL WHERE WATER HAMMER CONDITIONS MAY OCCUR. IF WATER HAMMER CONDITIONS EXIST, YOU MUST INSTALL A WATER HAMMER ARRESTER. CONTACT A PLUMBING PROFESSIONAL IF YOU ARE UNCERTAIN HOW TO CHECK FOR THIS CONDITION.

CAUTION DO NOT USE A TORCH OR OTHER HIGH TEMPERATURE SOURCES NEAR FILTER SYSTEM, CARTRIDGES, PLASTIC FITTINGS OR PLASTIC PLUMBING.

CAUTION DO NOT INSTALL UNIT IF COLLET IS MISSING. CONTACT YOUR SALES REPRESENTATIVE IF COLLETS ARE MISSING FROM ANY FITTINGS.

CAUTION ON PLASTIC FITTINGS, NEVER USE PIPE SEALANT OR PIPE DOPE. USE PTFE THREAD TAPE ONLY, PIPE DOPE PROPERTIES MAY DETERIORATE PLASTIC.

CAUTION TAKE CARE WHEN USING PLIERS OR PIPE WRENCHES TO TIGHTEN PLASTIC FITTINGS, AS DAMAGE MAY OCCUR IF OVERTIGHTENING OCCURS.

CAUTION DO NOT INSTALL IN DIRECT SUNLIGHT OR OUTDOORS.

CAUTION DO NOT INSTALL NEAR WATER PIPES WHICH WILL BE IN PATH OF A DRILLING TOOL WHEN SELECTING THE POSITION TO MOUNT THE BRACKET.

CAUTION ENSURE ALL TUBING AND FITTINGS ARE SECURE AND FREE OF LEAKS.

CAUTION THE DISPOSABLE FILTER CARTRIDGE MUST BE REPLACED EVERY 12 MONTHS OR AT THE RATED CAPACITY OR IF A NOTICEABLE REDUCTION IN FLOW RATE OCCURS.

In addition to the warnings and cautions in this manual, use the following guidelines for safe operation of the unit.

- Read all instructions before using equipment.
- Do not attempt to defeat the grounded connector.
- Install or locate the equipment only for its intended use as described in this manual.
- Do not use corrosive chemicals, water jet equipment, or other pressurized liquid spraying equipment to clean this unit.
- This equipment should be serviced by qualified personnel only. Contact the nearest Duke authorized service facility for adjustment or repair.
- Properly rated all poles mains protection and earthing compliance with local electric codes are required for safe operation of this unit.
- Water supply connections to the unit must comply with local plumbing code and/or standards.
- Disposal of the unit must be in accordance with local environmental codes and/or any other applicable codes.
- Install with the inlet and outlet ports as labeled. Make sure not to reverse connections.
- Some local codes may require the use of a licensed plumber or certified installer when disrupting a potable water line.
- **SAVE THESE INSTRUCTIONS**

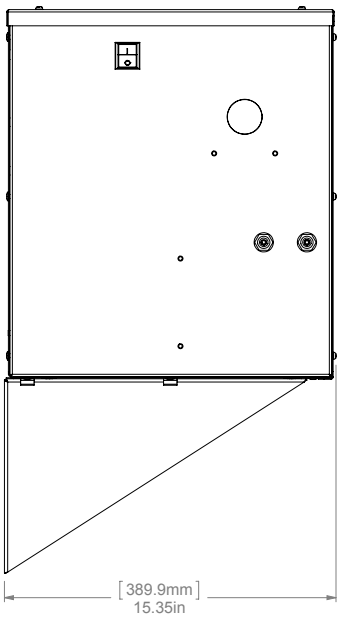
SPECIFICATIONS

Unit Weight:	42.1 lbs / 19.12 kg

Line Ratings - Reverse Osmosis Water Filtration System			
Line Supply Voltage (V)	Line Supply Frequency (Hz)	Line Phase Configuration	Total Maximum Line Current Amps (A)
120	60	Single Phase	0.7
220-240	50	Single Phase	0.2

Compliance Declaration - Reverse Osmosis Water Filtration System		
LISTED COMMERCIAL COOKING APPLIANCE 509L	Standard: UL197	File: ZDUZ.E365494
INDEXER COMMERCIAL APPAREIL DE CUISINE	Standard: CSA-C22.2 No. 109	File: ZDUZ7.E365494
CLASSIFIED EPH	Standard: ANSI / NSF 169	File: VCZU.SA32795
CE	Directive 2006/95/EC: EN60335 -1:2012 EN 60335-2-41:2003 + A2:2010	
	WEEE Directive 2002/96/EC RoHS 2011/65/EU	

DIMENSIONS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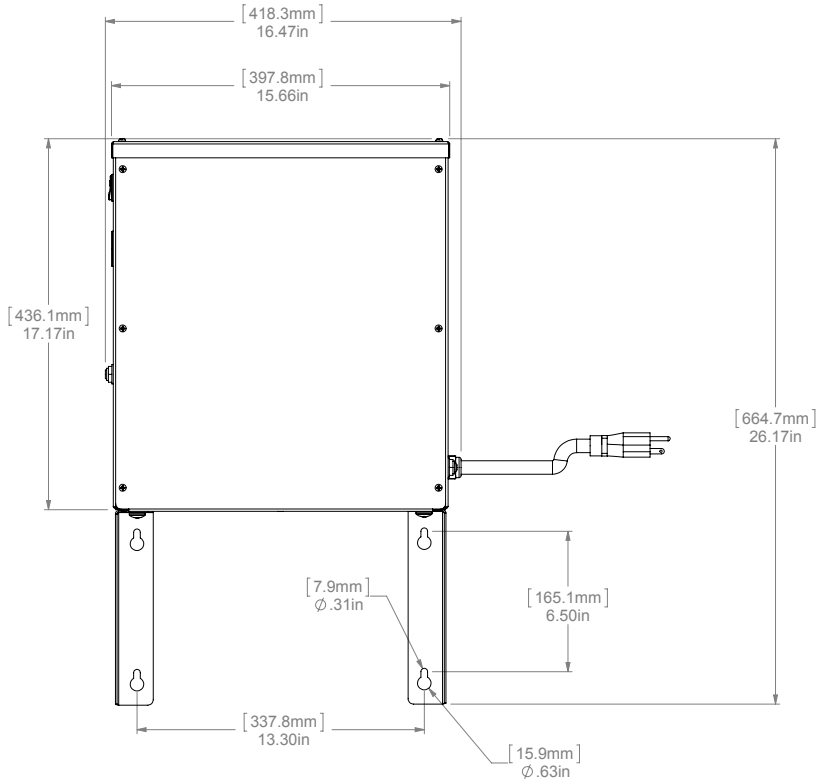
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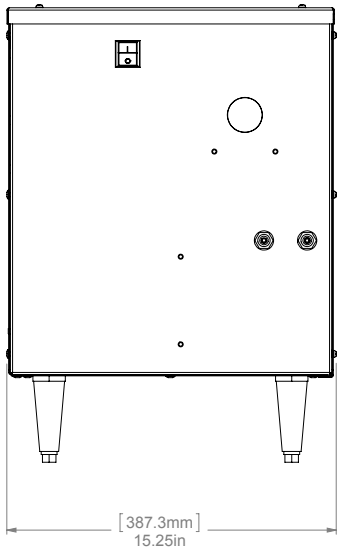
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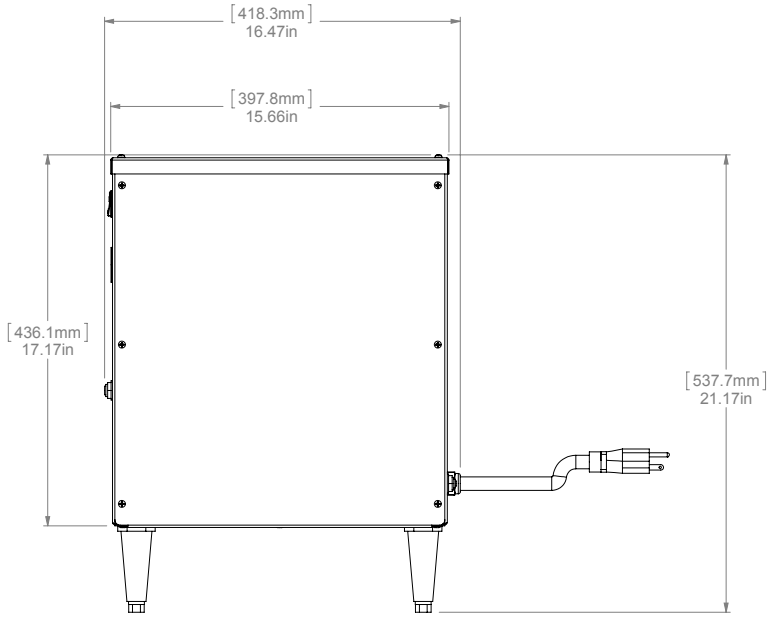
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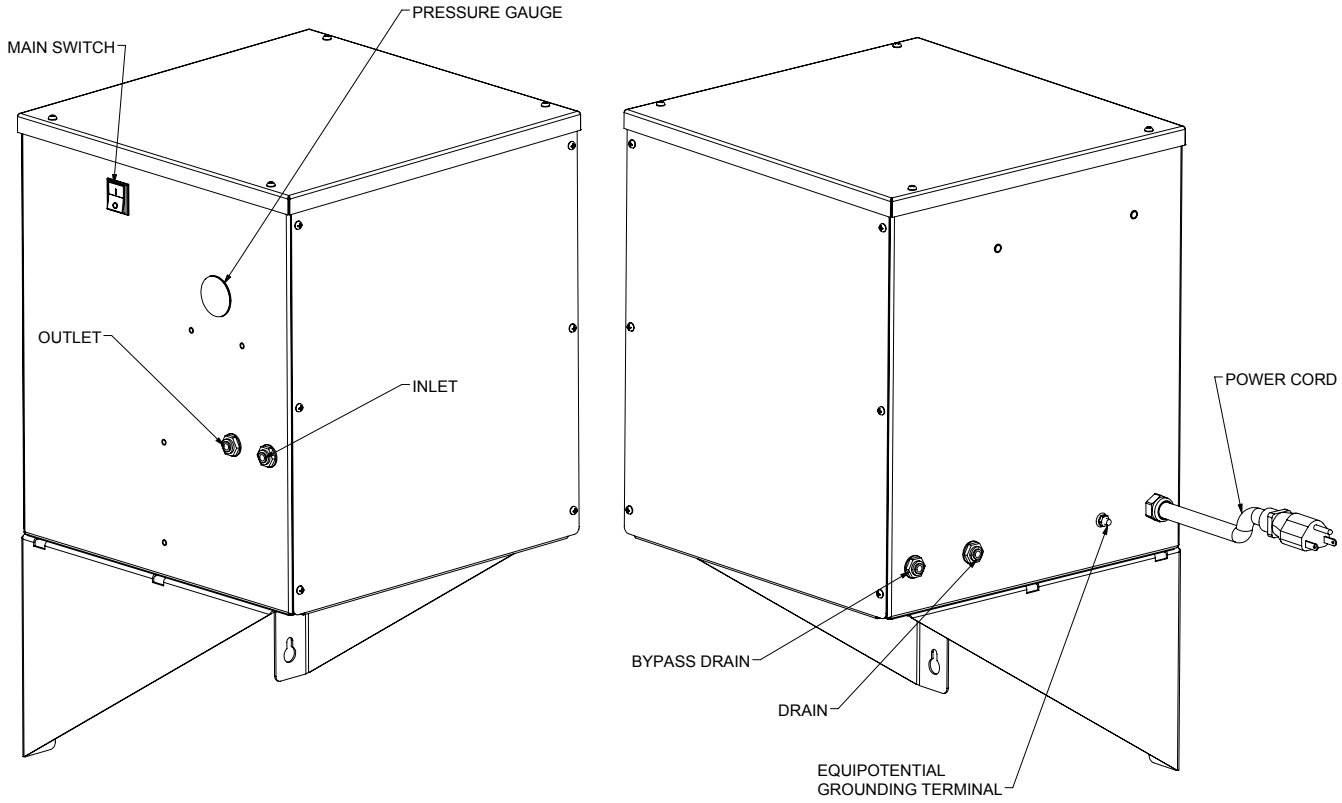
MAIN FEATURES



INSTALLATION

UNPACKING UNIT

Inspect the shipping carton and/or container, carefully noting any exterior damage on the delivery receipt; also note any damage not evident on the outside of the shipping container (concealed damage). Contact the carrier immediately and file a damage claim with them. Save all packing materials when filing a claim. Freight damage claims are the responsibility of the purchaser and are not covered by the warranty.

- Follow the instructions on the Carton Box for unpacking the unit.
- Inspect unit for damage such as, broken glass, etc.
- Report any dents or breakage to source of purchase immediately.
- **Do not attempt to use unit if damaged.**
- If unit has been stored in extremely cold area, wait a few hours before connecting power.

INSTALLATION CODES AND STANDARDS

In the United States, the Reverse Osmosis Water Filtration System (RO System) must be installed in accordance with the following:

1. State and local codes.
2. National Electrical Code (ANSI/NFPA No. 70, latest edition) available from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

In Canada, the RO System must be installed in accordance with the following:

1. Local codes.
2. Canadian Electrical Code (CSA C22.2 No. 3, latest edition) available from the Canadian Standards Association, 5060 Spectrum Way, Mississauga, Ontario, Canada L4W 5N6.

UNIT PLACEMENT

- Do not install unit next to source of heat, such as deep fryer, etc.
- Install unit on level surface floor.
- Minimum Clearance of 6" (152mm) must be maintained between the unit and any combustible substance.

The RO System can be ordered; a) with legs for countertop or floor placement or b) wall mounting brackets. Determine which configuration you have.

<u>With Legs:</u>
If your RO System is equipped with legs (4” adjustable) for countertop placement or floor placement, etc., select a location and position the RO System in an orientation that facilitates an organized plumbing and electrical routing. Level the unit, as necessary.

<u>Wall Mounting Brackets:</u>
If your RO System is supplied with wall mounting brackets, select a location and position for the RO System that is clear of electric wiring or water piping which may be in path of a drilling tool when selecting the position to mount the filter bracket.

1. Locate the mounting bracket template provided and tape it to the wall where the mounting bracket is to be installed.

2. Install mounting screws (not included) into each of the keyhole locations on the template. Be sure to leave a 1/8” to 1/4” space between the bottom of the screw head and the wall so that the bracket can be hung.

CAUTION Mounting hardware and mounting location must be capable of supporting a minimum of 45lbs (20.4 kg).

3. Hang the RO System from the mounting screws.

4. Once the bracket is hung, tighten the mounting screws so that the bracket is snug between the screw and the wall.

WATER SUPPLY CONNECTION

This equipment must be installed with adequate backflow protection and in accordance with all applicable federal, state, and/or local plumbing codes having jurisdiction.

TECHNICAL DESCRIPTION AND APPLICATION NOTES FOR RO BACKFLOW PREVENTER SYSTEM

Check with your local authority having jurisdiction regarding approvals for connecting the Duke Reverse Osmosis Water Filtration System to a potable water supply before making any plumbing connections. Plumbing code requirements vary, but European Union (CE) and other jurisdictions require a backflow prevention device that is factory-installed or supplied. The backflow prevention device used on Duke RO protects water supply systems by preventing the reverse flow of non-potable water into the potable domestic water system.

CAUTION The Reverse Osmosis Water Filtration System requires a minimum 60 psi (413.7 kPa) inlet water pressure.

CAUTION Do not install if water pressure exceeds 100 psi (690 kPa). If your water pressure exceeds 80 psi (552 kPa) you must install a pressure limiting valve. Contact a plumbing professional if you are uncertain how to check your water pressure.

CAUTION Do not install on hot water supply lines. The maximum operating water temperature of this filter system is 100°F (37.8°C).

CAUTION Do not reuse old hose-sets. Only use new hose-sets supplied with the appliance.”

The water inlet utilizes 1/4” (6.35mm), OD plastic or copper tubing. Install the tubing in a manner to ensure there are no kinks, strains, or tight bends. Leave sufficient length to allow unit movement for service and cleaning.

The tubing should be cut square and be free of any deformations at the connection points. All burrs and sharp edges should be removed for proper connection.

1. Shut off water supply.

2. Route a water line from the supply to the RO System Inlet (labeled).

3. Insert the tubing into the Inlet push-in fitting and fully seat it. The tubing must be inserted past the 0-ring and hit the backstop. Gently pull tube to ensure it is secured. Verify the locking collet is in place.

4. Following the above procedure, route a water line from the RO System Drain (labeled) to a sink or floor drain.

5. Following the above procedure , route a water line from the RO System Outlet (labeled)(treated water) to the Duke unit.

INSTALLATION OF PRE-FILTER AND RO MEMBRANE

⚠WARNING

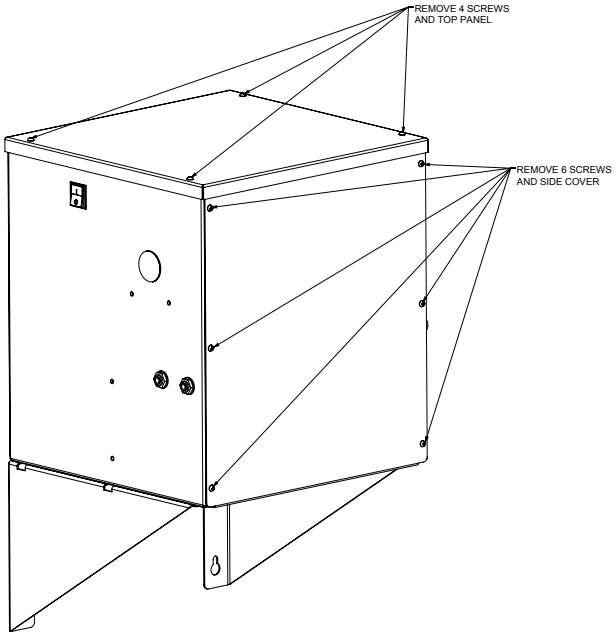
ELECTRICAL SHOCK HAZARD.

TASKS MUST BE PERFORMED BY A QUALIFIED SERVICE TECHNICIAN OR ELECTRICIAN.

1. Disconnect power by removing the plug from the wall outlet.

2. Remove the 4 screws securing the top panel and remove panel.

3. Remove the 6 screws securing the right side panel and remove panel.



4. Remove the prefilter cartridge from its packaging. Remove the red cap from the cartridge and moisten the o-rings with water. Insert the cartridge interconnect into the filter head. Be sure that the ears on the cartridge line up with the spaces in the head. Then, turn the cartridge 1/4 turn to the right.

NOTE: Be sure to install the cartridges into the proper heads by matching the icons on the cartridge labels with the icon on the heads.

5. Repeat steps for the RO Membrane.

6. Check that all plumbing connections are secure.

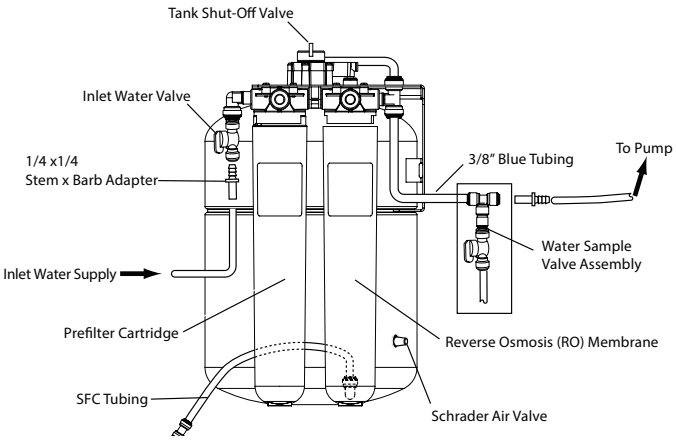
7. Open tank shut-off valve and inlet water valve. Check the system for leaks. If any leaks are noted, turn off the water supply and correct the leak before proceeding.

8. Divert the Water Sample Valve outlet to drain. Open valve and let water run through the RO system to drain for 10 minutes.

9. Close valve.

NOTE: Please allow the water tank to fill (approximately 60 minutes) before using treated water.

10. Reinstall both panels removed in steps above.



⚠WARNING

ELECTRICAL SHOCK HAZARD UNIT MUST BE SAFETY GROUNDED, EARTHED.

DO NOT MODIFY, DEFEAT ELECTRICAL CONNECTIONS OR ALTER PLUG.

ELECTRICAL CONNECTIONS

The US RO System models are factory wired for 120 Volts AC, single phase, 60 Hz.

⚠WARNING BEFORE CONNECTING THE UNIT TO THE POWER SOURCE, VERIFY THAT THE VOLTAGE AND PHASE OF THE POWER SOURCE ARE IDENTICAL TO THE VOLTAGE AND PHASE INFORMATION ON THE DATA LABEL.

⚠WARNING ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH THE APPLICABLE PORTIONS OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER LOCAL ELECTRICAL CODES.

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

1. Check that the unit Main Switch is in the OFF position.

2. Connect the power cord of the unit to the electrical power source.

3. Turn the Main Switch to the ON position.

NOTICE If the supply cord is damaged, it must be replaced by a special cord or a special cord assembly available from Duke Manufacturing Co. or its service agent.

EARTHING INSTRUCTIONS

THE UNIT MUST BE GROUNDED. Grounding reduces risk of electric shock by providing an escape wire for the electric current if an electrical short occurs. This unit is equipped with a cord having a grounding wire with a grounding plug. The plug must be plugged into a receptacle that is properly installed and grounded.

Consult a qualified electrician or service agent if grounding instructions are not completely understood, or if doubt exists as to whether the oven is properly grounded.

DO NOT USE AN EXTENSION CORD. If the product power cord is too short, have a qualified electrician install a three-slot receptacle (or the country specific receptacle for International Units). This unit should be plugged into a separate circuit with the electrical rating as provided on the product data plate.

EXTERNAL EQUIPOTENTIAL BONDING TERMINAL (EXPORT ONLY)

This equipment has supplemental bonding terminal. The terminal provides an external bonding connection used in addition to the earthing prong on the plug. The terminal provides a connection for bonding to the equipment enclosure. The external equipotential bonding terminal is located on the rear outside surface of the oven, the terminal is marked with this symbol.

OPERATING INSTRUCTIONS

DAILY START-UP

1. Verify power cord is connected.
2. Verify the water supply line is connected to the Inlet and any shutoff valve to the unit is open.
3. Verify that the Outlet line (treated water) is connected, routed to the desired appliance, and any shutoff valves to the appliance are opened.
4. Verify the main switch located on the front side of the unit is in the ON position.

OPERATING INSTRUCTIONS

There are no specific operating instructions beyond the Daily Start-Up instructions.

CARE AND CLEANING

⚠ CAUTION

ELECTRICAL SHOCK HAZARD:

DO NOT WASH WITH WATER JET OR HOSE.

CAUTION

DO NOT USE OVEN CLEANERS, CAUSTIC CLEANERS, DEGREASERS, ACIDS, AMMONIA PRODUCTS, ABRASIVE CLEANERS, STEEL WOOL, OR ABRASIVE PADS CONTAINING IRON. THESE CAN DAMAGE THE STAINLESS STEEL, DOOR GASKETS AND PLASTIC SURFACES.

MONTHLY CLEANING INSTRUCTIONS

1. Verify or place the Main Switch in the “OFF” position.
2. Disconnect power by removing plug from the wall outlet.
3. Clean stainless steel exterior with stainless steel cleaner or polish, or with hot soapy water followed by a clean water rinse.

ANNUAL MAINTENANCE

PRE-FILTER CARTRIDGE & RO MEMBRANE CARTRIDGE CHANGE-OUT INSTRUCTIONS

Pre-filter Cartridge (Replace every 12 months)

1. Close tank shut-off and inlet valves.
2. Depressurize system.
3. Turn used prefilter cartridge 1/4 turn to the left.
4. Pull down on cartridge.
5. Discard used cartridge.
6. Remove red cap from new cartridge and moisten the o-ring with water. Insert the new cartridge into the filter head. Be sure that the ears on the cartridge line up with the spaces in the head.
7. Turn new cartridge 1/4 turn to the right.
8. Open tank shut-off and inlet valves.
9. Check for leaks.

NOTE: Be sure to install the cartridge into the proper head by matching the icon on the cartridge label with the icon on the head.

10. Divert the Water Sample Valve outlet to the Bypass Drain. Open valve and let water run through the RO system to drain for 10 minutes.

NOTE: Connect tubing to Bypass Drain, as required.

11. Close valve.

NOTE: Please allow the water tank to fill (approximately 60 minutes) before using treated water.

RO Membrane Cartridge (Replace every 24 months)

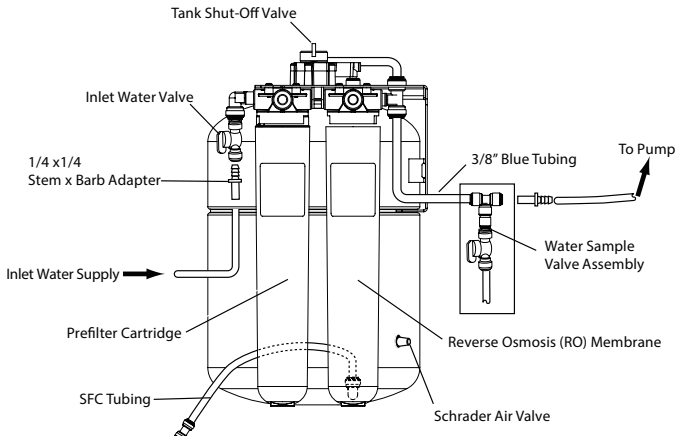
1. Close tank shut-off and inlet valves.
2. Depressurize system.
3. Turn used RO membrane cartridge 1/4 turn to the left.
4. Pull down on RO cartridge.
5. Discard used RO cartridge.
6. Remove red cap from new cartridge and moisten the o-ring with water.
7. Insert of new RO cartridge into the filter head. Be sure that the ears on the cartridge line up with the spaces in the head.
8. Turn new cartridge 1/4 turn to the right.
9. Open tank shut-off and inlet valves.
10. Divert the Water Sample Valve outlet to the Bypass Drain. Open valve and let water run through the RO system to drain for 10 minutes.

NOTE: Connect tubing to Bypass Drain, as required.

11. Close valve.

NOTE: Please allow the water tank to fill (approximately 60 minutes) before using treated water.

TANK PRESSURE CHECK



Tools Required:

- Piece of 1/4" tubing or Bucket
- Bicycle or tire pressure gauge
- Bicycle tire pump

1. Empty the storage tank.

   a. Shut off the inlet water valve.

   b. Make sure tank shut-off valve located at the top of the water tank is open.

   c. Open the water sample valve and drain the tank via the Bypass Drain until empty. Leave water sample valve open.

NOTE: Connect tubing to Bypass Drain, as required.

2. Unscrew the blue cap on the side of the tank to expose the Schrader Air Valve.

3. Read the tank's air pressure using a standard bicycle or automobile tire pressure gauge that is capable of reading pressure accurately from 0-10 psi (0 - 68.9 kPa).

4. The air pressure should be between 8 -10psi (55.2 - 68.9 kPa).

5. If the air pressure is below 8 psi (55.2 kPa) or above 10 psi (68.9 kPa) complete the following steps.

   a. Using a standard bicycle pump add or release air pressure in the tank.

   b. Repeat Steps 4-5 until the pressure is 8-10 psi (55.2 - 68.9 kPa).

   c. Make sure the blue cap is put back onto the air pressure port.

6. Close the Water Sample Valve.

7. Open the tank shut-off valve. Turn on the inlet water valve if they were turned off.

8. Allow 60 minutes for tank to fill before using the treated water.

ACCUMULATOR TANK PRESSURE CHECK

1. Remove the valve stem cap.

2. Read the tank's air pressure using a standard bicycle or automobile tire pressure gauge that is capable of reading pressure accurately from 40 – 50 psi (275 - 345 kPa).

3. The air pressure should be 45 psi (310 kPa).

4. If the air pressure is below 45 psi (310 kPa) or above 50 psi (345 kPa) complete the following steps.

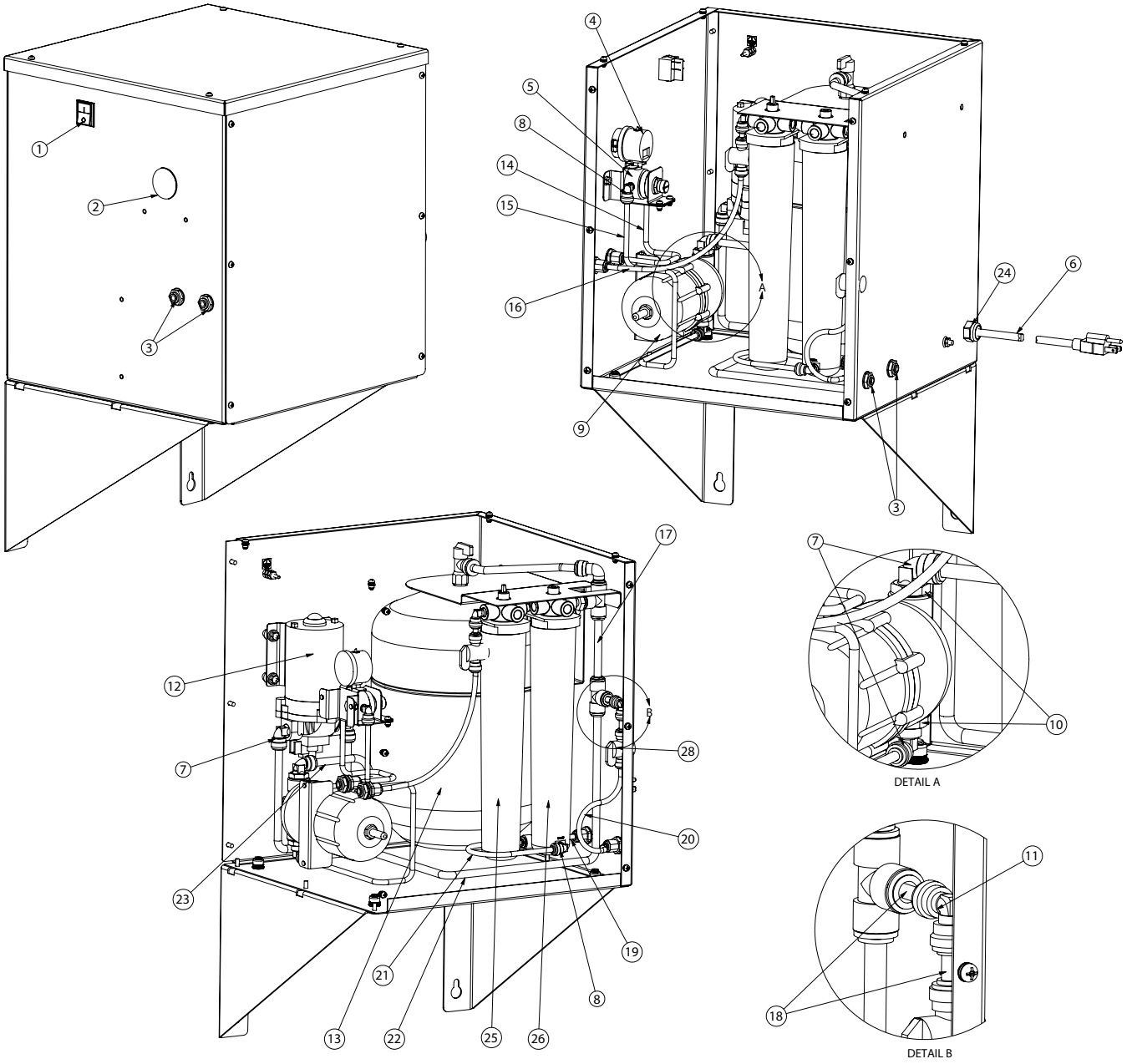
   a. Using a standard bicycle pump add or release air pressure in the tank.

   b. Repeat Steps 4-5 until the pressure is 45 psi (310 kPa).

   c. Re-install the valve stem cap.

NOTE: The pre-charge valve stem cap MUST be tight to prevent air leakage.

PARTS LISTS AND ILLUSTRATIONS

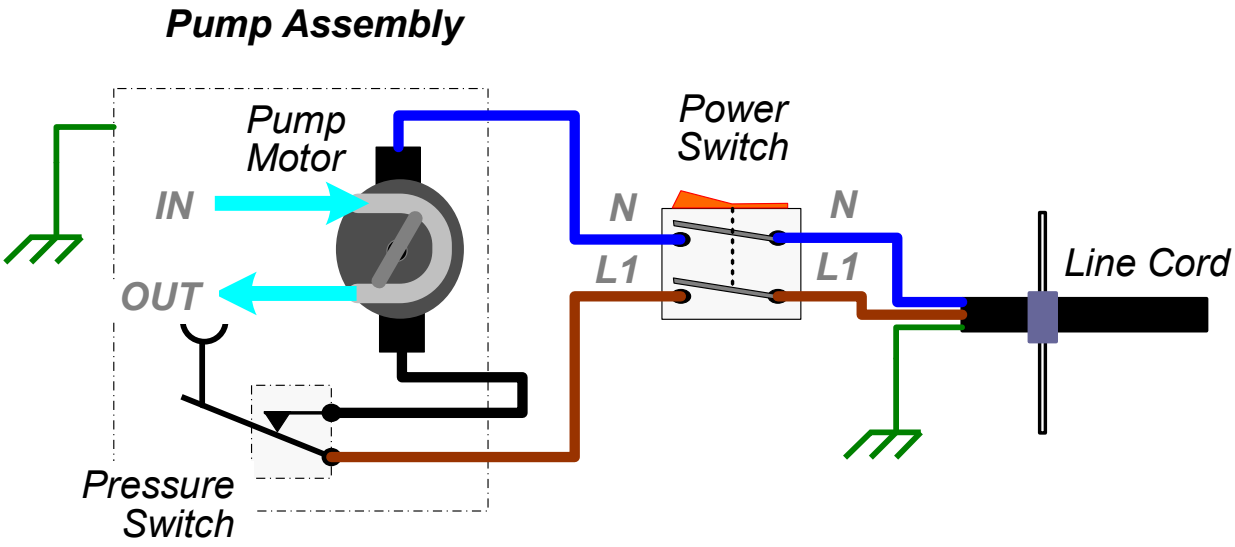


Locator	P/N	Description
1	160406	SWITCH, DPST, 20A, 125V
	157886	SWITCH, DPST, 20A 250V
2	169733	PLUG, 1.5", HEYCO
3	169732	FITTING, 1/4" TUBE X 1/4" TUBE
4	169730	PRESSURE GUAGE, W/ MOUNT, ROS
5	169729	REGULATOR, ROS
6	176428	PWR CORD ASM, 15A 125V, 9.0' LG
	156631	CORD, POWER, ASY, 16A 230V, CE
7	169734	FITTING, ELBOW, 3/8" TUBE X 3/8" NPT
8	169731	FITTING, ELBOW, 1/4" TUBE X 1/8" NPT
9	169725	ACCUMULATOR, ROS
10	169785	FITTING, 1/2" MALE X 3/8" FEMALE
11	169735	FITTING, ELBOW, 1/4" TUBE X 1/4" TUBE
12	169787	PUMP, 115V
	169786	PUMP, 230V
13	169724	FILTERATION SYSTEM, FLASHGARD, ROS
14	512583	1/4" TUBE, REGULATOR TO OUTLET (CUT TO 15.5" LENGTH)
15	512583	1/4" TUBE, ACCUMULATOR TO REGULATOR (CUT TO 15.75" LENGTH)
16	512583	1/4" TUBE, INLET TO FILTER (CUT TO 11.5" LENGTH)
17	169767	3/8" TUBE, FILTER TO TEE (CUT TO 3" LENGTH)
18	512583	1/4" TUBE (CUT TO 1.5" LENGTH)
19	(COMES WITH 169724)	SFC TUBING WITH FITTING (COMES WITH FLASHGARD 169724)
20	512583	1/4" TUBE, VALVE TO BYPASS OUT (CUT TO 12" LENGTH)
21	512583	1/4" TUBE, MEMBRANE TO CONNECTOR (CUT TO 11" LENGTH)
22	169767	3/8" TUBE, TEE TO PUMP (CUT TO 26" LENGTH)
23	169767	3/8" TUBE, PUMP TO ACCUMULATOR (CUT TO 14" LENGTH)
24	175515	STRAIN RELIEF, POWER CORD
25	169741	PRE-FILTER, FLASHGARD, ROS
26	169742	MEMBRANE, FLASHGARD, ROS
27	155140	LEG, ADJUSTABLE, 4" (NOT SHOWN)
28	169751	PLUG VALVE, 1/4" TUBE X 1/4" TUBE

TROUBLESHOOTING

Problem	Cause	Solution	Notes
Unit Runs Low or Out of Water	Low Feed Water Pressure	Repair Booster Pump/System	Contact Duke Service
		Add Booster Pump Assembly	Only if Booster System is not installed
	RO Membrane Fouled	Replace RO Module and SFC Tubing (Stealth Flow Control)	Feed Water Pressure, Temperature, RO Module Flow Rate and Reject Water should be checked
	Storage Tank Air Charge is Low	Drain Tank using Sample Valve, with Sample Valve Open, Pump-up Air Charge, 8 -10 psi (55.2 - 68.9 kPa), close Sample Valve	Unscrew Blue Cap to access Schrader Air Valve
	Pre-Filter is Plugged by Sediment (Particles)	Replace Pre-Filter	A more frequent Pre-Filter change-out schedule may be needed
	Slow Leak in the Distribution Line	Repair Leak	The unit produces filtered water slowly. A dripping leak can prevent the tank from filling
Unit Never Shuts Off (Continually Runs to Drain)	RO Membrane Partially Fouled, Unit can not produce enough water to keep up the demand	Replace RO Module and SFC Tubing (Stealth Flow Control)	High levels of hardness minerals may be present in feed water, monitor reject flow for plugging
	Product Water Check Valve has failed allowing storage tank flow to drain after unit is shut off	Check Reject Water flow to drain in the morning. Unit should be off and no flow to drain. If flow to drain exists, turn off the feed water valve and check for flow to drain on 10 minutes. If the flow to drain remains steady, replace RO Module	Reject Water flow to drain should stop when the feed water valve is off
	Hydraulic Shut-off Valve has failed	Replace valve	Should only be performed by a qualified technician

WIRING DIAGRAM



Your Solutions Partner

Duke Manufacturing Co.

2305 N. Broadway
St. Louis, MO 63102
Phone: 314-231-1130
Toll Free: 1-800-735-3853
Fax: 314-231-5074

www.dukemfg.com

Your Solutions Partner

Installation Instructions

Flex-Tech

- *Closed Loop - Open Loop Firmware*
  Kit 600499

Parts - Included

Open Loop Firmware

Closed Loop Firmware

Keep these in a safe place for future needs.

No tools Required

CAUTION: **Please read these instructions completely before attempting to service this equipment**

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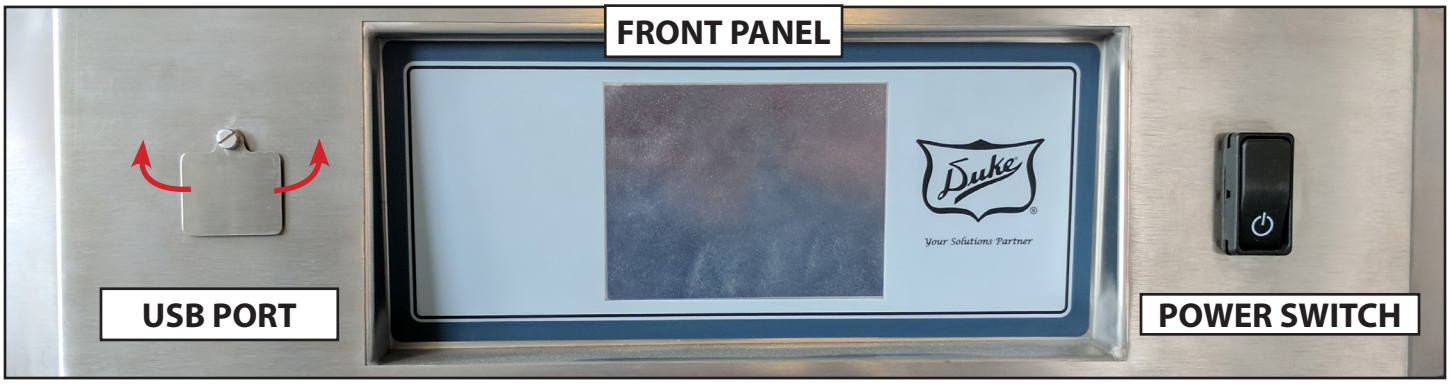
P/N 169594
REV A Date 10/02/2017

FIRMWARE UPDATE



In case of RH Sensor malfunction, the unit can still be operated using the Open Loop Firmware or **"Firmware No Sensor".**

STEP 1
Shut power off to unit by flipping the power switch to the off position.

STEP 2
Find the USB Stick labeled "Firmware No Sensor" and insert into the USB port on the left side of the control panel. Turn on the power switch.

STEP 3
Wait until the flash drive stops flashing and you hear a beep. Then remove the flash drive. from the unit. Ensure the unit is running and reaches temerature.

STEP 4
Check the firmware in the control.

- Touch ! upper right corner
- Touch User ICON
- Touch ABOUT selection
- View Firmware Version verify the correct firmware revision is shown (example FlexTech 10.12.6)
- Touch the back arrow 3X

NOTE: The unit is now operating without using the RH sensor and a new sensor should be ordered.

Note: The unit will go into the **Open Loop Mode for** FTU-5 if the temperature set point reachs 196F, and the FTU-10 if the temperature set point is greater than 196 F. User can go to control screen to check the proper settings are being used for FTU-5 or FTU-10. It will also display a message "**Humidity operating in default mode".** The user needs to call for service to replace the RH Sensor.

When the New RH Sensor is replaced, then the Closed Loop Firmware or **"Firmware with Sensor"** should be loaded. Follow the same steps above using the USB Stick labeled **"Firmware with Sensor".** Follow the instructions with the new sensor to enter the RH Sensor Offset in the main controller. The unit is now operating on Closed Loop Mode using the RH Sensor.

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