



Heater Replacement Information and Instructions

HEATER REPLACEMENT INFORMATION

Heating elements for the RTS humidifier are available with four different power ratings in three different physical configurations:

- 2.0 kW, Single Loop
- 4.0 kW, Single Loop
- 6.0 kW, Double Loop
- 9.0 kW, Triple Loop

When replacing heating elements, correct installation is crucial for safety and proper operation. Ensure that the proper heaters are being used per the specified model. See the heater replacement table in the [RTS Humidifier Installation, Operation and Maintenance](#) to determine quantity and part number of heaters required.

NOTE: Before removal of the heaters and heater harness, take a picture of the connections and bussing to ensure connections after a heater change are repeated. The bussing can be different between models and power types.

MODEL RX-XX-1

One-stage models can have one, two, or three heating elements. In some three-heater applications, two different heater sizes are used. Install the highest kW heater to the right (when looking from the outer face) and the lowest kW heater is to be installed in the center (Figure 1-1). The left heater location is used for the remaining heater, regardless of the heater power rating.

MODEL RX-XX-2

Two-stage models can have from two to six heaters with each row of heaters representing a stage. Similar to 1-stage units, four and six heater applications may have two different sized heaters. It is imperative that the different sized heaters be split evenly between stages. For each stage (row), install the highest kW heater to the right (when looking from the outer face) and the lowest kW heater is to be installed in the center (Figure 1-2). For six heater applications, the left heater location is used for the remaining heater, regardless of the heater power rating.

FIGURE 1-1: RX-XX-1, 1 STAGE UNITS

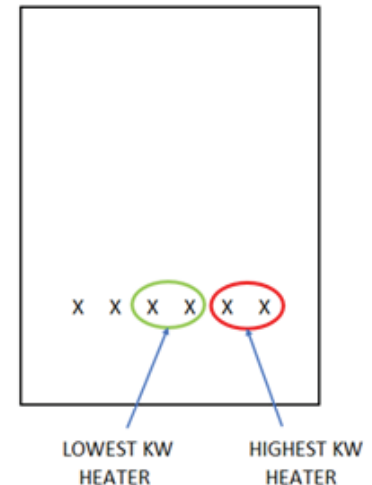
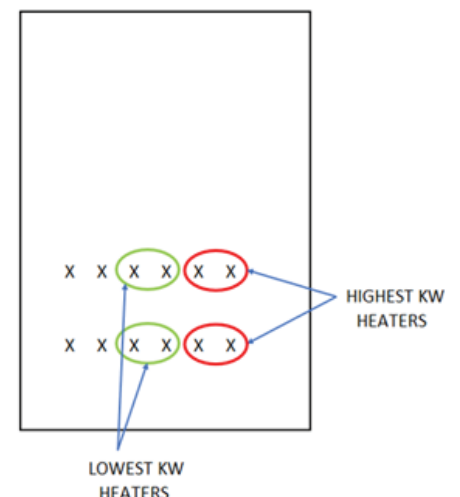


FIGURE 1-2: RX-XX-2, 2 STAGE UNITS



MODEL RX-XX-3

Three-stage models can have from three to nine heaters with each row on each heater mounting plate representing a stage. Some six and nine heater applications will have two different sized heaters. It is imperative that the different sized heaters be split evenly between stages.

Left Heater Plate: For each stage (row), install the highest kW heater to the right (when looking from the outer face) and the lowest kW heater is to be installed in the center. For nine heater applications, the left heater location is used for the remaining heater, regardless of the heater power rating.

Right Heater Plate: For each stage (row), install the highest kW heater to the left (when looking from the outer face) and the lowest kW heater is to be installed in the center. For nine heater applications, the right heater location is used for the remaining heater, regardless of the heater power rating. See Figure 2-1.

MODEL RX-XX-4

Four-stage models can have from four to twelve heaters with each row on each heater mounting plate representing a stage. Some eight and twelve heater applications will have two different sized heaters. It is imperative that the different sized heaters be split evenly between stages. See Figure 2-2.

Left Heater Plate: For each stage (row), install the highest kW heater to the right (when looking from the outer face) and the lowest kW heater is to be installed in the center. For nine heater applications, the left heater location is used for the remaining heater, regardless of the heater power rating.

Right Heater Plate: For each stage (row), install the highest kW heater to the left (when looking from the outer face) and the lowest kW heater is to be installed in the center. For nine heater applications, the right heater location is used for the remaining heater, regardless of the heater power rating.

FIGURE 2-1: RX-XX-3, 3 STAGE UNITS

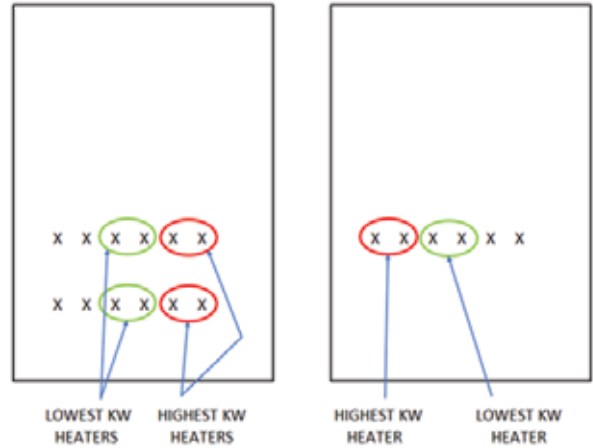
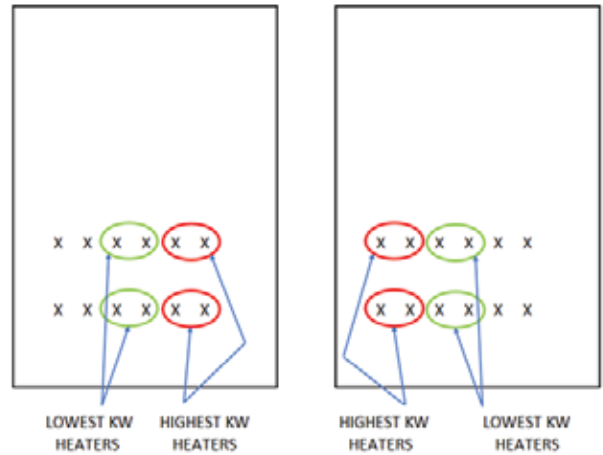


FIGURE 2-2: RX-XX-4, 4 STAGE UNITS



HEATER REPLACEMENT INSTRUCTIONS

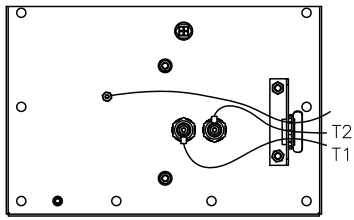
DISASSEMBLY

1. Fully drain tank and ensure tank is cool. All power sources must be turned OFF.
2. If housed in an enclosure, remove the front door(s). Disconnect display cable if applicable.
3. Disconnect the heater cable connector(s) from the bottom of the control cabinet.
4. Disconnect the plug at the temperature sensor on the heater plate.
5. Refer to the [RTS Humidifier Installation, Operation and Maintenance](#) for heater plate removal.
 - a. Remove all except two perimeter nuts.
 - b. Loosen the remaining two nuts.
 - c. Alternate tightening (clockwise) the two heater plate bolts until the gasket seal is broken.
 - d. Remove the loosened heater plate nuts.
6. Remove two nuts securing heater terminal cover. Remove cover.
7. Disconnect cables and buss bars (if applicable) from heater terminals.
8. Remove heater mounting nut and slide heater out from opposite side.
9. Clean heater plate surface and ensure old gasket is removed completely.

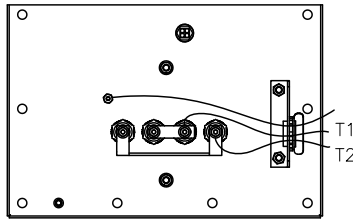
ASSEMBLY

1. Ensure that a new gasket is installed on the new heater and slide terminals through heater plate.
2. From the outside, install a new safety washer (orientation - dome out) and heater mounting nut.
3. Torque all heater mounting nuts to 180 in-lbs and ensure heaters do not rotate during tightening sequence. Heating elements must not touch each other and remain untwisted.
4. Install buss bars and cables in the same orientation as removed. Terminal nuts are to be torqued to 25 in-lbs.
5. Install terminal cover and nuts. Torque to 60 in-lbs.
6. Clean gasket sealing surface on both the heater plate and the tank. Install a new heater plate gasket on the tank, using the weld studs to hold it in place.
7. Back out heater plate removal bolts and install heater plate on tank. Torque all heater plate nuts to 60 in-lbs in an alternating pattern.
8. Reconnect the heater cable(s) to the connectors at the bottom of the control cabinet.
9. Reconnect the plug at the temperature sensor on the heater plate.
10. Ensure all tools and cleaning utensils are removed. Install front door(s) and reconnect display if applicable.

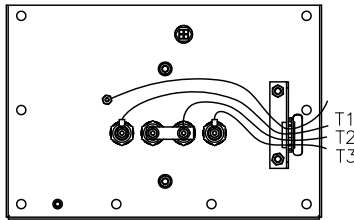
FIGURE 4-1: BUSS BAR CONFIGURATIONS



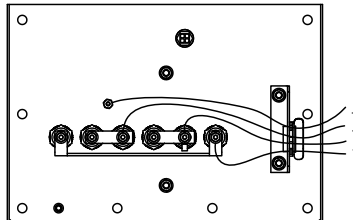
FRONT VIEW
SINGLE PHASE
1 HEATER ARRANGEMENT



FRONT VIEW
SINGLE PHASE
2 HEATER ARRANGEMENT

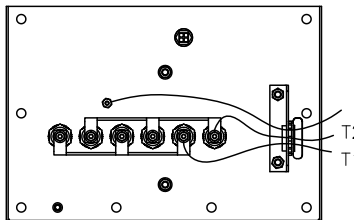


FRONT VIEW
THREE PHASE
2 HEATER ARRANGEMENT



FRONT VIEW
THREE PHASE
3 HEATER ARRANGEMENT

OM-8245



FRONT VIEW
SINGLE PHASE
3 HEATER ARRANGEMENT

Notes:

- Views show 1-stage arrangement.
- Each stage is equal to one row of heaters.
- Each stage will replicate the bussing shown in Figure 4-1.
- Right panel of 3 and 4-stage units will be a mirror image.

Expect quality from the industry leader

For more than 65 years, DriSteem has been leading the industry with creative and reliable humidification control solutions. Our focus on quality is evident in the construction of all our products. DriSteem also leads the industry with an optional extended warranty.

For more information

www.dristeem.com
sales@dristeem.com

For the most recent product information visit our Web site: www.dristeem.com



DRI-STEEM Corporation

a subsidiary of Research Products Corporation
DriSteem U.S. operations are ISO 9001:2015 certified

U.S. Headquarters:
14949 Technology Drive
Eden Prairie, MN 55344
800-328-4447 or 952-949-2415
952-229-3200 (fax)

Europe, Middle East, Asia Pacific
+32 11 82 35 95
sales.europe@dristeem.com

Continuous product improvement is a policy of DriSteem Corporation; therefore, product features and specifications are subject to change without notice.

DriSteem, DriCalc, Rapid-sorb, Ultra-sorb, Vapor-logic, and RTS humidifier are registered trademarks of Research Products Corporation and are filed for trademark registration in Canada and the European community.

Product and corporate names used in this document may be trademarks or registered trademarks. They are used for explanation only without intent to infringe.

Patents pending.

© 2024 Research Products Corporation

Form No. RTS-HEATER-INSTRUCTIONS-REVA-0324
Part No. 890000-241 REV A