



UltimateAir, Inc.
178 Mill Street
Athens, Ohio 45701

Tel: 740-594-2277
Fax: 740-592-1499
www.ultimateair.com

WARMFLO 2.5Kw High Efficiency Duct Heater Installation and Setup Guide



Thank you for purchasing the WarmFlo 2.5 Kilowatt heater for use with your *RecoupAerator*®!

For Defrost Pre-Heat: The WarmFlo Defrost Heater is a high efficiency defrost option for extended periods of outdoor air temperatures below 12°F. The defrost will actively pre-heat the incoming air, maintaining a 12°F air stream just above the automatic frost prevention shut-off temperature of the *RecoupAerator*® ensuring a Fresh Air supply below freezing temperatures. This feature is electronically controlled, and will not use more electricity than needed to maintain the incoming air temperature.

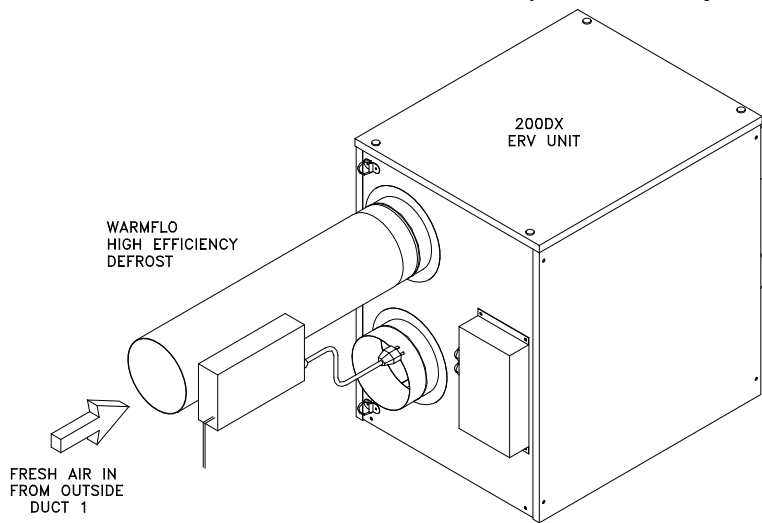
For Post Heat: As a post heater, the WarmFlo will deliver heat into the ducted space using fresh air flow provided by the *RecoupAerator*®.

Setup Defrost Pre-Heat

1 The WarmFlo 2.5KW, as a high efficiency defrost, connects to the “Fresh Air In”, noted as Duct 1 of the *RecoupAerator*. Match the air flow direction labeled on the WarmFlo with the *RecoupAerator* air flow direction. Use Screws, mastic, and/or metal tape to make the duct connections. It is important there is no air leakage.

2 Install the WarmFlo Temperature Sensor in the duct connected to the heater output. The sensor should be installed approximately 12” from the output of the WarmFlo unit thru a ½” hole. Attach the sensor mounting plate to the exterior of the duct with sheet metal screws (self drilling TEK Screw recommended). Seal the area around the sensor and hole with metal tape or other appropriate sealant.

After installation of the WarmFlo and the remaining duct work, all ducts connected to the outside must be insulated. The electronics box mounted to the WarmFlo may be covered if desired after wiring.

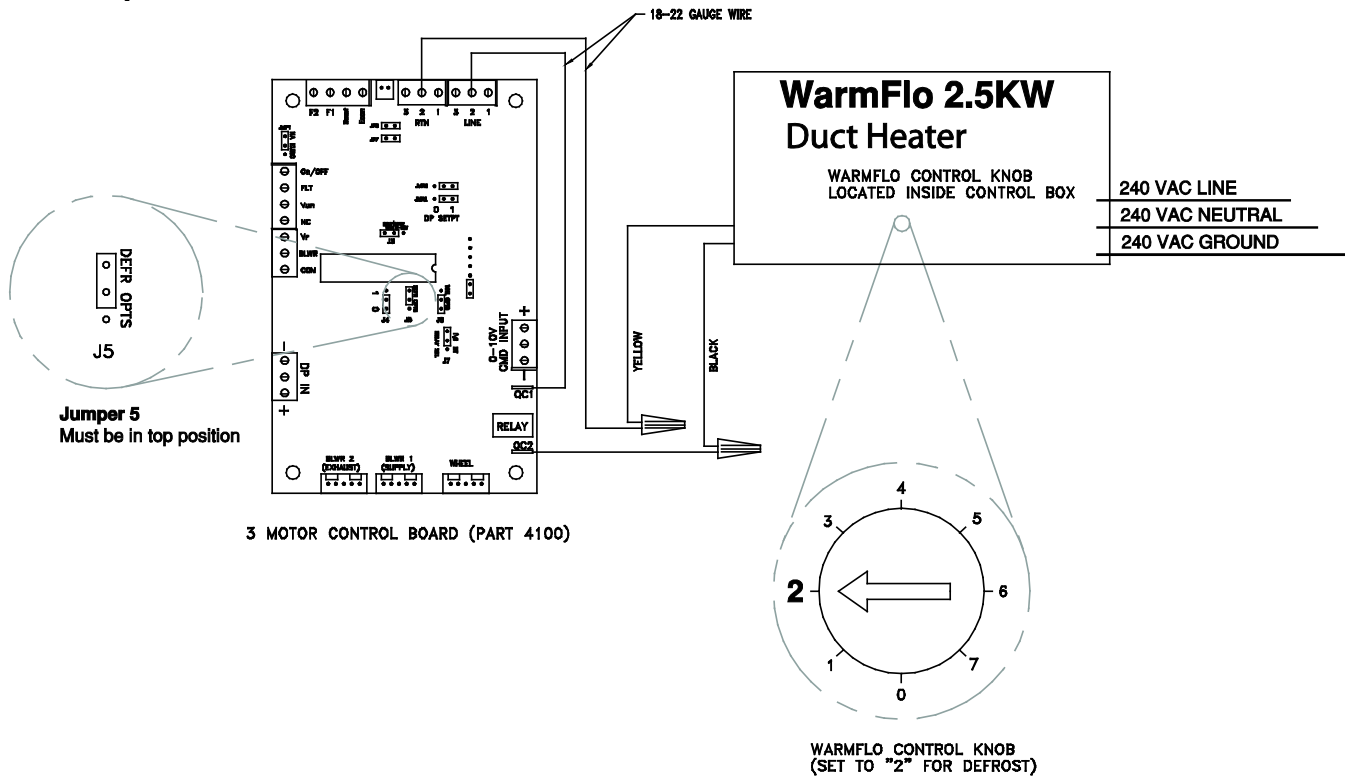


3 Set the Output Temperature to position “2”. The Temperature Setting knob is inside the WarmFlo control box. The *RecoupAerator* is designed to shut off below 10°F, and the WarmFlo Defrost Heat is meant to keep the Fresh Air Inlet at above the *RecoupAerator* frost protection shutoff temperature. The WarmFlo Defrost Preheat ensures the *RecoupAerator* provides a Fresh Air supply below freezing temperatures.

| WarmFlo Control Board Settings | |
|--------------------------------|-------------------------|
| Control Knob Setting | Output Temperature (°F) |
| 0 | 0 |
| 1 | 6 |
| 2 | 12°F Pre-Heat |
| 3 | 18 |
| 4 | 88 |
| 5 | 100 |
| 6 | 112 |
| 7 | 124 |

Setup Defrost Pre-Heat (cont)

4 Jumper 5 must be in the top position as shown below.



WarmFlo Defrost Pre-Heat Energy Usage

| Outside Temp F | Single RecoupAerator | | | | | 2 RecoupAerators | |
|----------------|----------------------|--------|--------|--------|--------|------------------|--------|
| | 30CFM | 70 | 100 | 150 | 200 | 300 | 400 |
| 10.0 | 0 Watts | 0 | 0 | 0 | 0 | 0 | 0 |
| 5.0 | 47.5 | 110.8 | 158.3 | 237.4 | 316.5 | 474.8 | 633.0 |
| 0.0 | 95.0 | 221.6 | 316.5 | 474.8 | 633.0 | 949.6 | 1266.1 |
| -5.0 | 142.4 | 332.3 | 474.8 | 712.2 | 949.6 | 1424.3 | 1899.1 |
| -10.0 | 189.9 | 443.1 | 633.0 | 949.6 | 1266.1 | 1899.1 | 2532.1 |
| -15.0 | 237.4 | 553.9 | 791.3 | 1186.9 | 1582.6 | 2373.9 | |
| -20.0 | 284.9 | 664.7 | 949.6 | 1424.3 | 1899.1 | | |
| -25.0 | 332.3 | 775.5 | 1107.8 | 1661.7 | 2215.6 | | |
| -30.0 | 379.8 | 886.2 | 1266.1 | 1899.1 | 2532.1 | | |
| -35.0 | 427.3 | 997.0 | 1424.3 | 2136.5 | | | |
| -40.0 | 474.8 | 1107.8 | 1582.6 | 2373.9 | | | |
| -45.0 | 522.3 | 1218.6 | 1740.8 | | | | |
| -50.0 | 569.7 | 1329.4 | 1899.1 | | | | |
| -55.0 | 617.2 | 1440.2 | 2057.4 | | | | |
| -60.0 | 664.7 | 1550.9 | 2215.6 | | | | |

Watts Electric

WarmFlo 1.0
WarmFlo 2.5

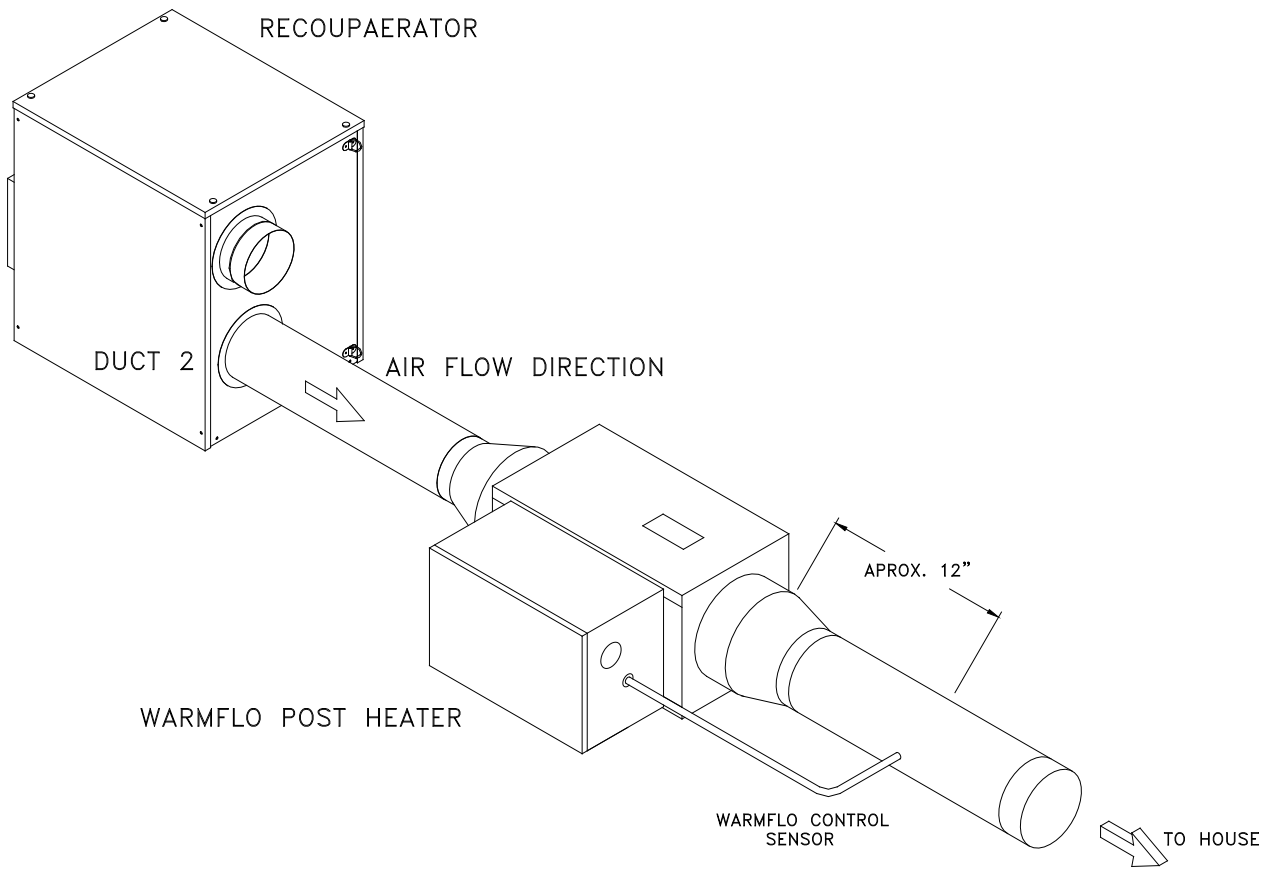
* In extreme outside low temperatures, it is recommended to run the RecoupAerator® with as low a flow rate as possible.

Setup Post-Heat

1 The WarmFlo heater connects to the *RecoupAerator*[®] Fresh Air Duct into the house labeled Duct 2 on the *RecoupAerator*[®]. When connecting the WarmFlo, match the air flow direction as noted on the heater.

Screws, mastic, and/or metal tape are suggested to seal the ducts after making the connections. It is important there is no air leakage. See details below.

Required: Duct Reducers 8" to 6" diameter for connection to the WarmFlo heater.



| WarmFlo 2.5KW Post Heat Energy Usage | | | |
|--------------------------------------|---------------|------|-------|
| Unit CFM Delivery | Max. Temp (F) | BTU | Watts |
| 70 | 124 | 4234 | 1241 |
| 100 | 124 | 6048 | 1773 |
| 150 | 120.5 | 8505 | 2493 |
| 200 | 107.4 | 8510 | 2494 |

* In extreme outside low temperatures, it is recommended to run the *RecoupAerator*[®] at as low a flow rate as possible.

Setup Post-Heat (cont)

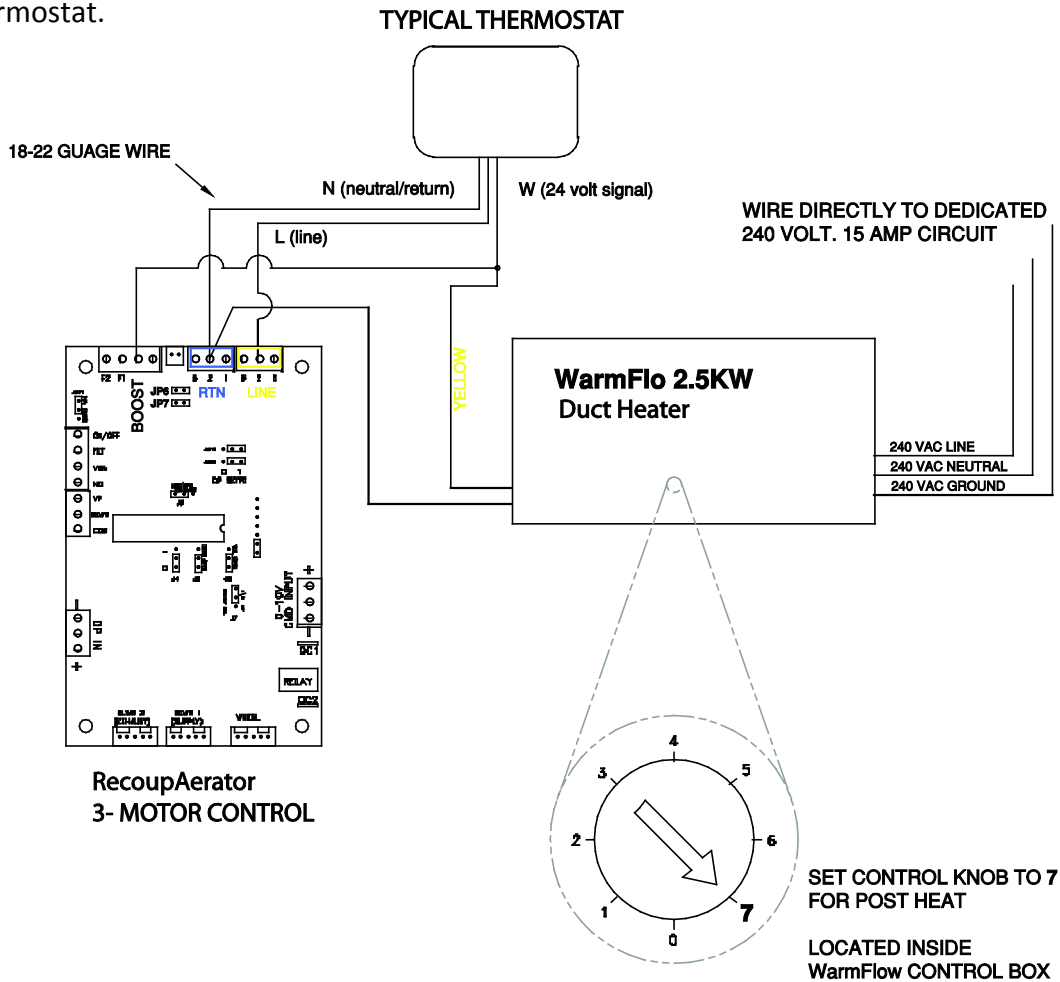
2 Install the WarmFlo temperature sensor in the duct connected to the heater output. The sensor should be installed approximately 12" from the output of the WarmFlo unit thru a ½" hole. Attach the sensor mounting plate to the exterior of the duct with sheet metal screws (self drilling TEK Screw recommended). Seal the area around the sensor and hole with metal tape or other appropriate sealant.

3 Set the WarmFlo temperature control to **position 7**, as to deliver the maximum amount of Btu's, which will meet the heating demand in as little time as possible. Adjustments can be made per the specific installation.

The Warmflo is a self modulated, pulse heater with a temperature feedback control loop. This feedback controls the output temperature of the air stream. This temperature is manually set on the WarmFlo (please see the instructions provided with the heater).

Wiring Option 1 WarmFlo Post Heat for BOOST (full Flow when heating)

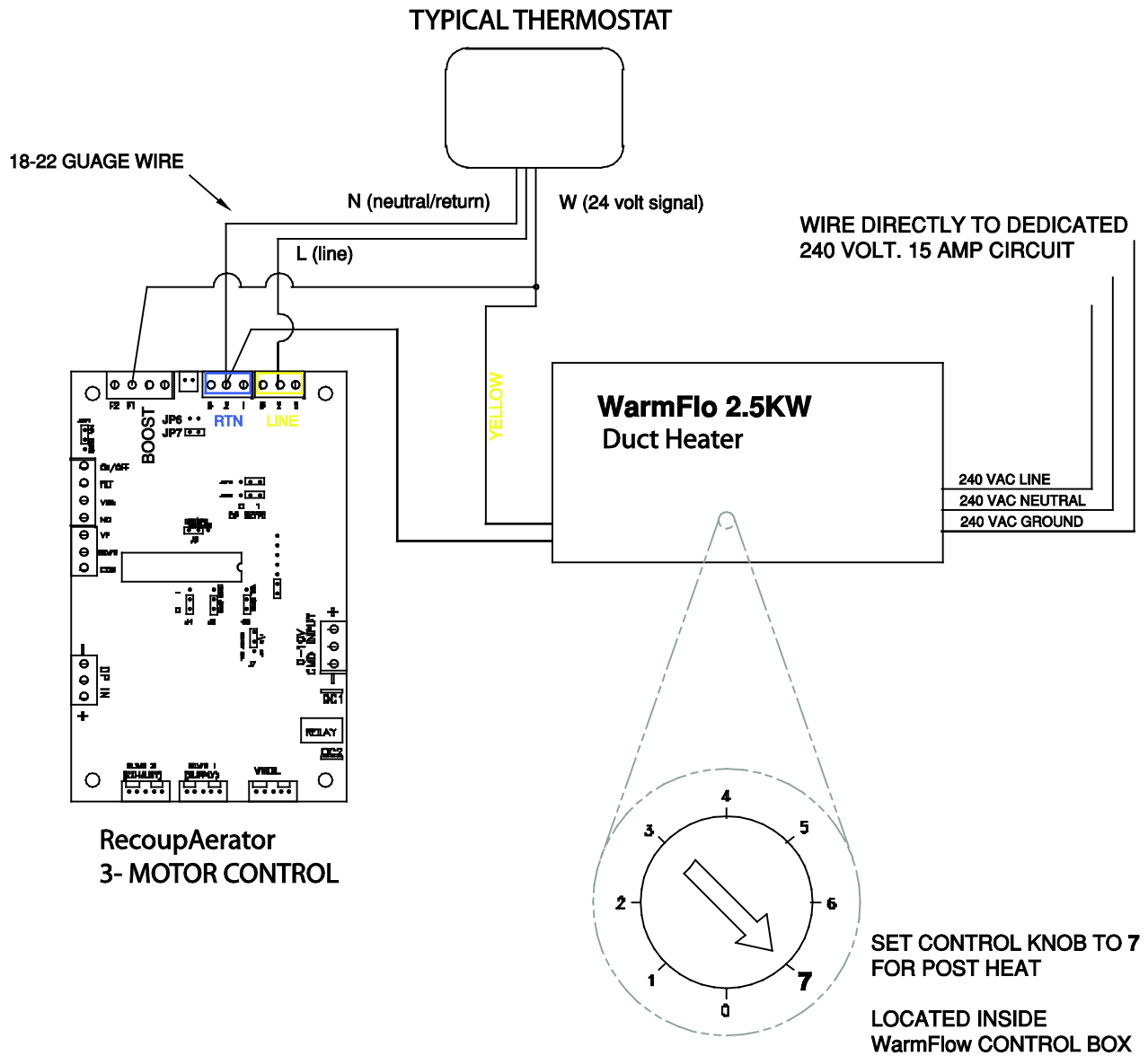
When using as a post heater, the WarmFlo 2.5KW should be wired directly to a dedicated 240 volt, 15 amp circuit. The post heater requires a 24 VAC signal supplied by the *RecoupAerator*, and is switched on by the thermostat.



Wiring Option 2 Wiring WarmFlo Post Heat with flow set by RecoupAerator Wall Dial

This post-heat wiring option will run the WarmFlo Heater at a flow rate set by the user on the *RecoupAerator* Wall Dial Control. The WarmFlo post-heater requires a 24 VAC signal supplied by the *RecoupAerator*, and is switched on when the Thermostat calls for heat.

Remove **Jumper 6** and **connect the 24VAC** signal line to **F1** on the *RecoupAerator*.



Note: If an external 24VAC source is used remove both jumpers 6 & 7. For example, removing both jumpers 6 & 7 allows control by a furnace 24VAC source while safely isolating the *RecoupAerator's* 24VAC system.

Call for more information on any aspect of your WarmFlo Duct Heater.

Revised: Tue November 28, 2012 MB