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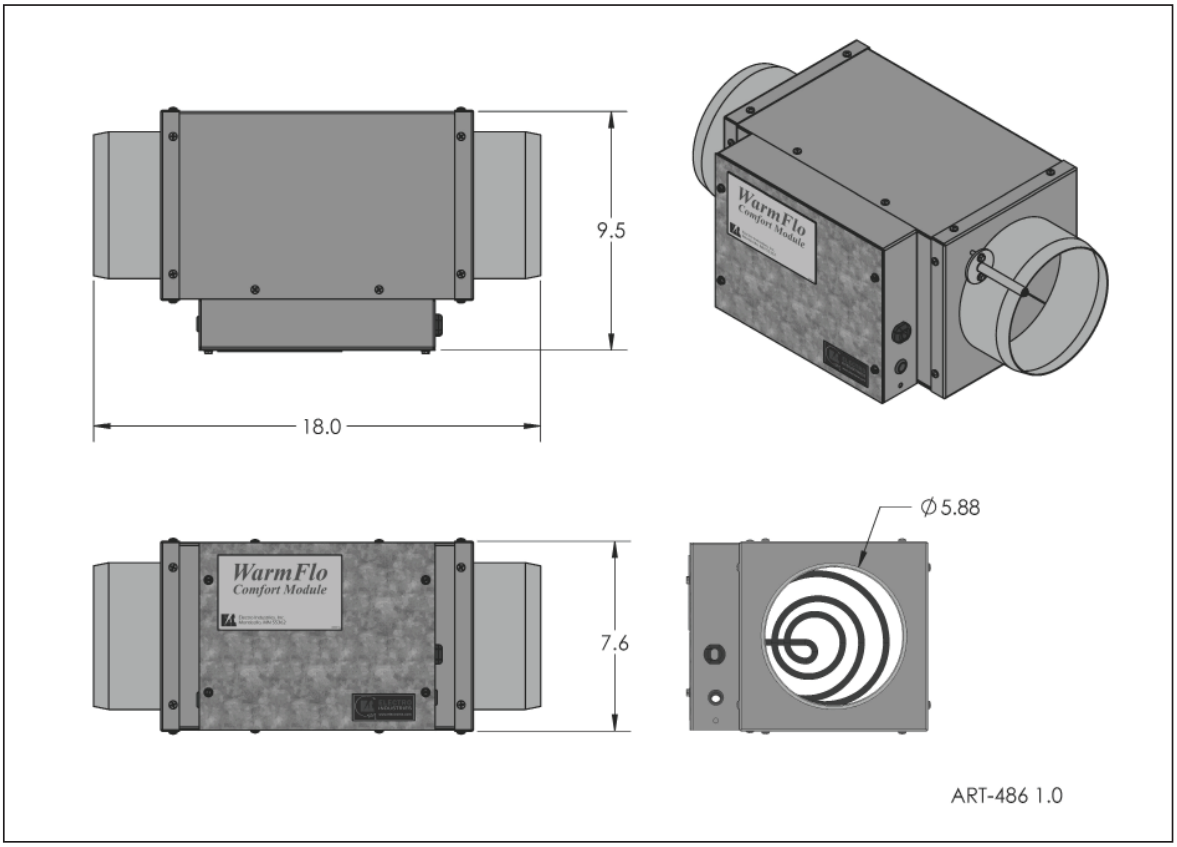
WARMFLO 1kW High Efficiency Duct Heater

Installation and Setup Guide



Thank you for your purchase of the WarmFlo 1.0 kW heater!

Defrost Pre-Heat: The WarmFlo Defrost Heater is a high efficiency defrost option for extended periods of outdoor air temperatures below 12ºF. The defrost will actively pre-heat the incoming air, maintaining a 12ºF air stream just above the automatic frost-prevention-shut-off temperature of the *RecoupAerator*®. The WarmFlo is more than a typical duct heater. Included is an electronic duct sensor and control for modulating temperature so the WarmFlo will not use more electricity than needed to maintain the incoming air temperature.

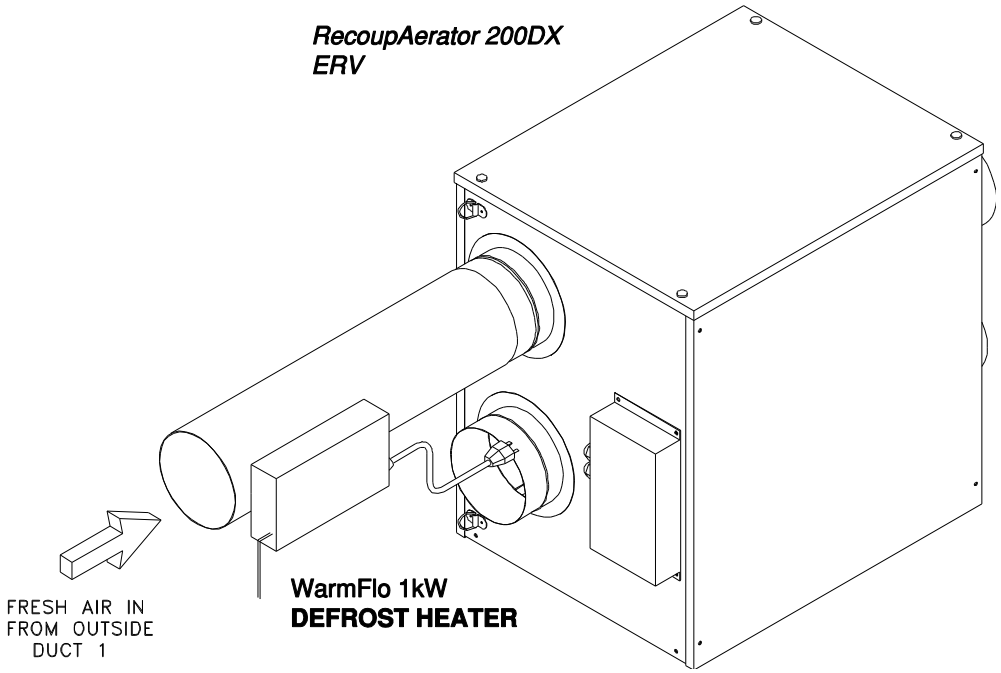
Space Heat: As a Space heater, the WarmFlo will deliver heat into the living space using air flow provided by the *RecoupAerator*®**.**

*Setup**Defrost Pre-Heat***

1 The WarmFlo 1kW, as a high efficiency defrost, connects to the "Fresh Air In", noted as Duct 1 of the *RecoupAerator*. Match the airflow 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. *After setup of the WarmFlo and the remaining ductwork, all ducts connected to the outside must be insulated, including the duct section housing the WarmFlo Defrost Pre-Heater. The electronics box mounted to the WarmFlo may be covered after wiring.*

2 Install the WarmFLo Temperature Sensor downstream from 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.

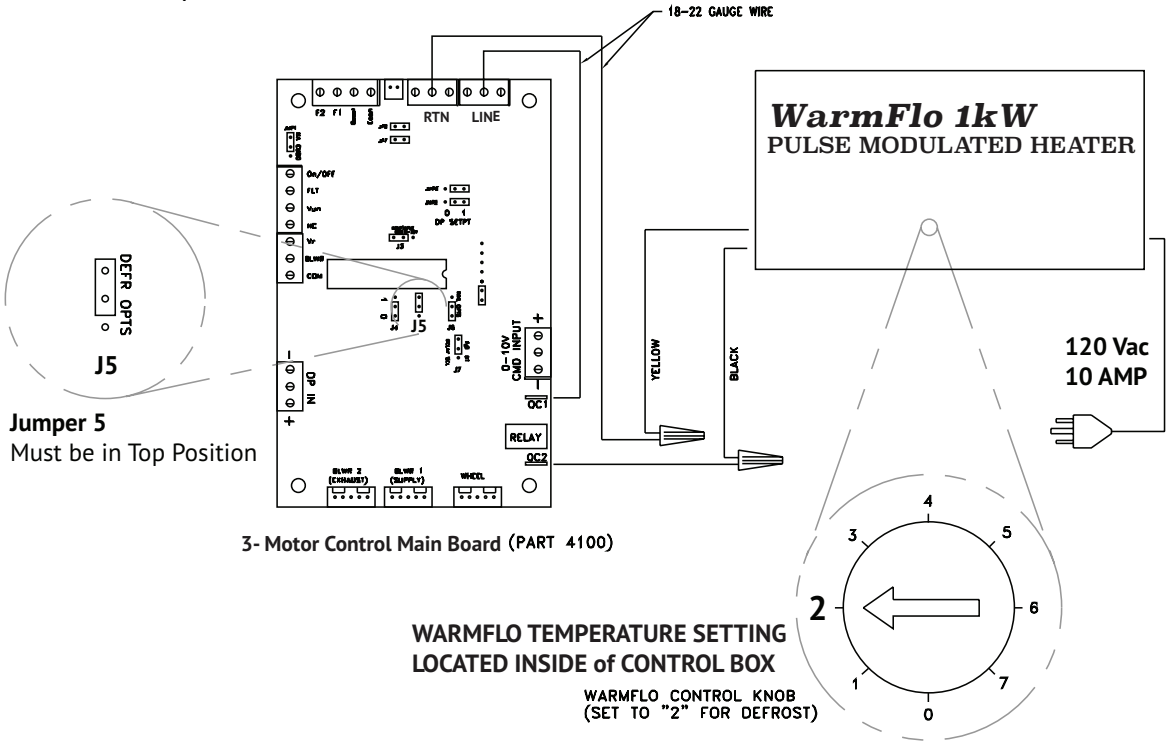
3 Set the Temperature Control at position "2" inside the WarmFlo control box. The *RecoupAerator* is designed to shut off below 10°F, and the WarmFlo Defrost Heat is meant to keep the Fresh Air Inlet at above the *RecoupAerator* frost-protection-shutoff temperature. The WarmFlo Defrost Preheat ensures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



***WarmFlo* Control Board Settings**	
Temperature Control Setting	Output Temperature (°F)
0	0
1	6
2	**12°F Pre-Heat**
3	18
4	65
5	70
6	85
7	124

SetupDefrost Pre-Heat (continued)

4 Jumper 5 must be in the top position. When used as a defrost heater, the WarmFlo should be plugged into a dedicated 10 amp circuit. The heater also requires a low voltage signal from the *RecoupAerator*® for operation.

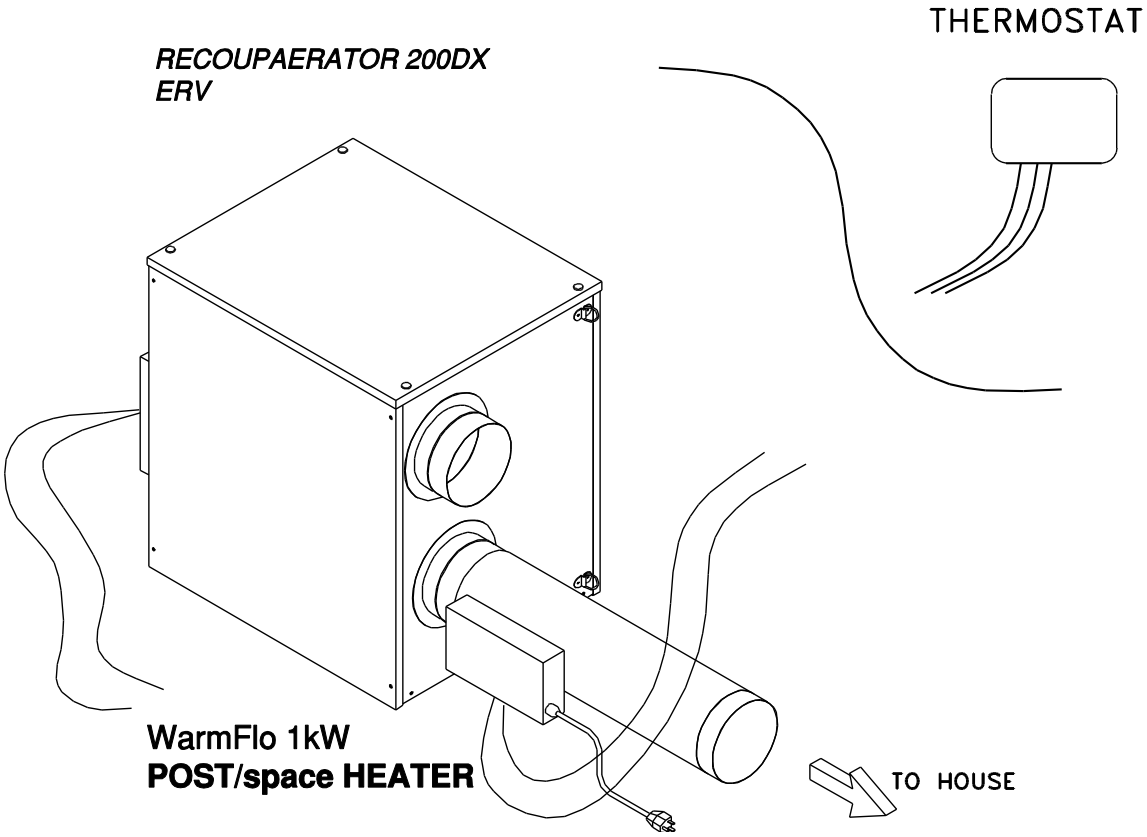


	Single RecoupAerator					*2 RecoupAerators*	
Outside Temp F	**30** *CFM*	**70**	**100**	**150**	**200**	**300**	**400**
10.0	**0** *watts*	**0**	**0**	**0**	**0**	**0**	**0**
5.0	**47.5**	**110.8**	**158.3**	**237.4**	**316.5**	**474.8**	**633.0**
0.0	**95.0**	**221.6**	**316.5**	**474.8**	**633.0**	**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**		*Watts Electric*	**WarmFlo 1.0**	
-55.0	**617.2**	**1440.2**	**2057.4**			**WarmFlo 2.5**	
-60.0	**664.7**	**1550.9**	**2215.6**				

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

*Setup**Space Heat/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 airflow 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 to have no air leakage.



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).

WarmFlo 1.0 kW Space Heat Energy Usage			
Unit CFM Delivery	Max. Temp (F)	BTU	Watts
70	113.1	3410	999
100	99.6	3413	1000
150	89	3402	997
200	83.8	3413	1000

The WarmFlo Duct Heater is rated at 1KW, or 3412 Btu.
Output data can be calculated as follows:
Temperature rise = (Btu/CFM)/1.08. Assuming 68°F room temperature.

SetupSpace-Heat_(cont)

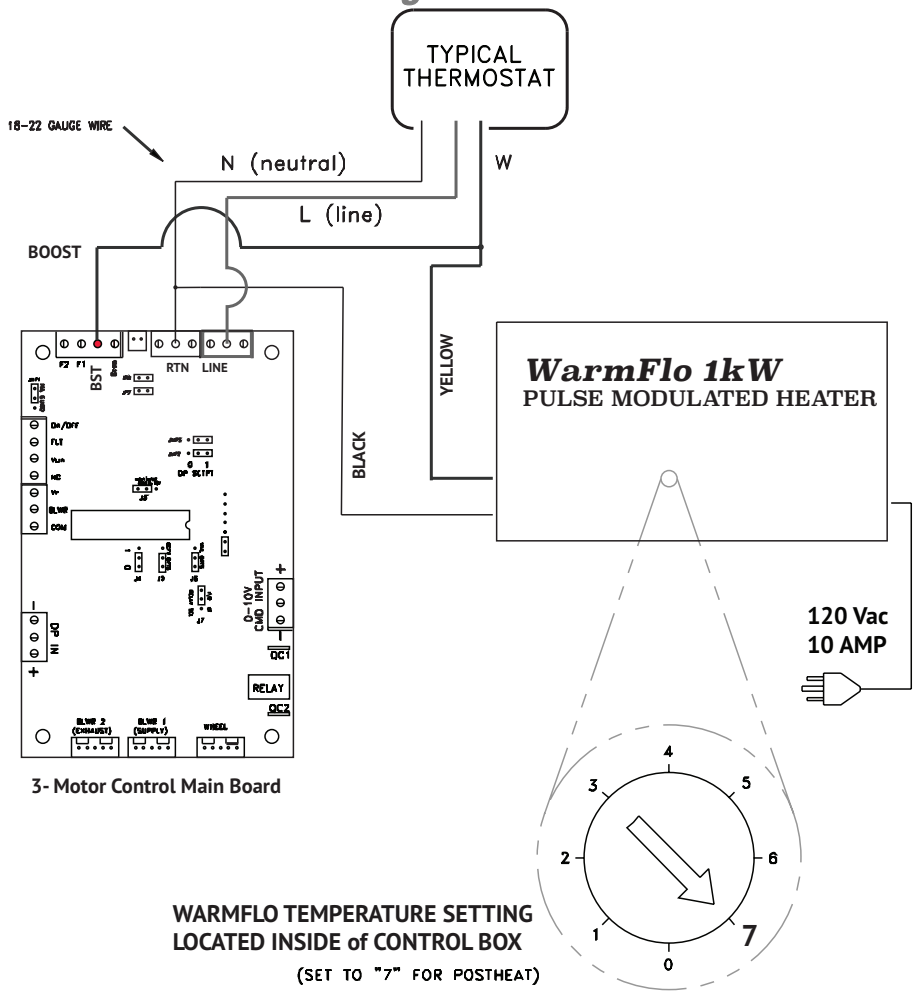
2 Install the WarmFLo Temperature Sensor downstream from the heater output. The sensor should be installed approximately 12” from the output of the WarmFlo unit thru a ½” hole. Attach the sensor mounting plate to the exterior of the duct with sheet metal screws (self drilling TEK Screw recommended).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

3 As a space heater, the WarmFlo should be plugged into a dedicated 10 amp circuit. The WarmFlo space-heater requires a 24 VAC signal supplied by the *RecoupAerator***,** and is switched on when the Thermostat calls for heat.

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.

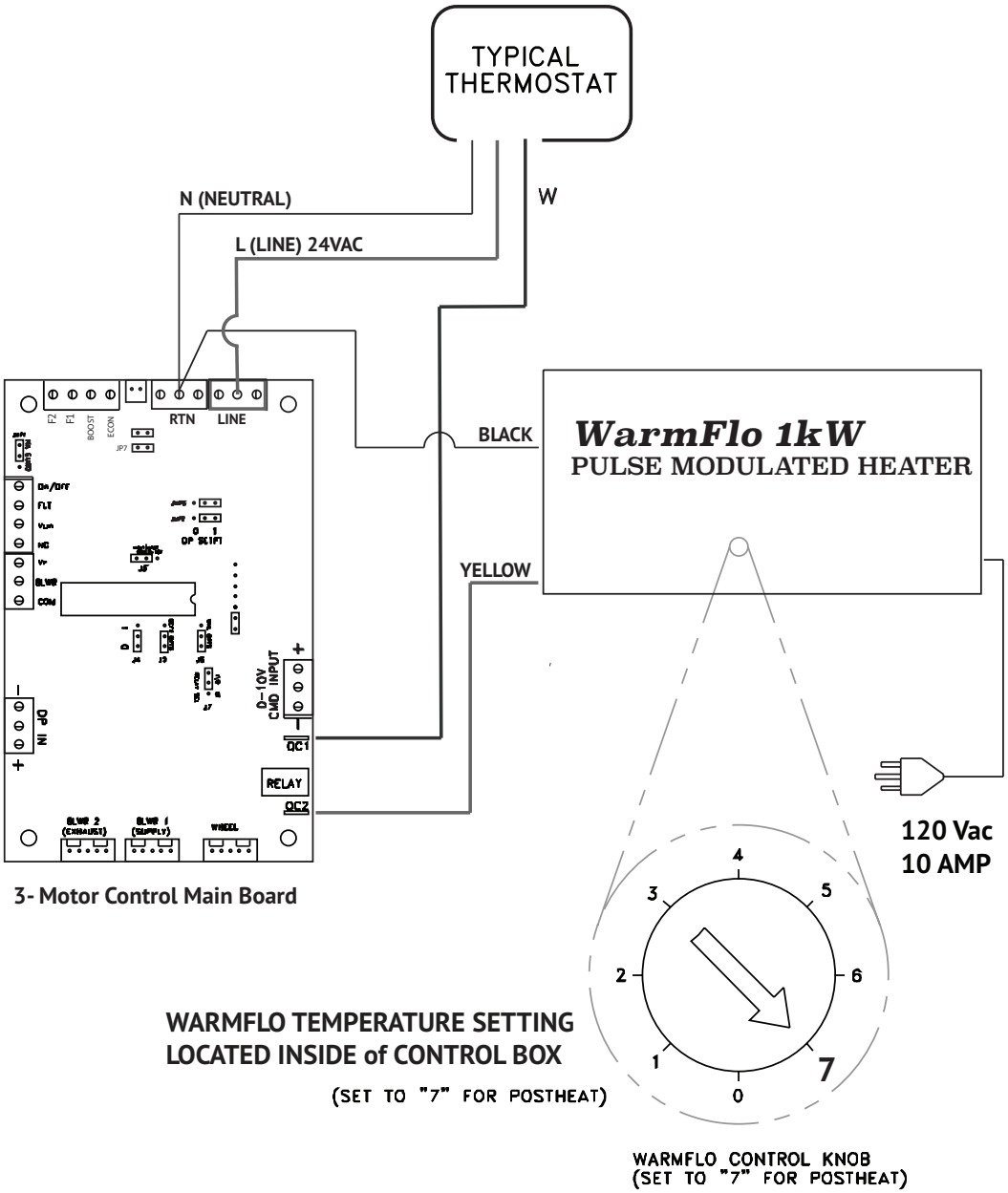
4 Set the WarmFlo temperature control to **position 7**, as to deliver the maximum amount of heat, which will meet the heating demand in as little time as possible. Adjustments can be made per the specific installation.

Space Heat **Wiring Option 1**
with BOOST full Flow when heating



***Space Heat* Wiring Option 2**
with flow set by RecoupAerator Wall Dial

This wiring option will run the WarmFlo Heater at a flow rate set by the user on the *RecoupAerator* Wall Dial Flow Control. The higher the flow setting on the dial, the more heat will be produced.



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

Revised: Nov 9th 2016 by MB