



## **McDaniel Metals, Inc.**

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### Installation Instructions for PGED 101 & 102 DOWNFLOW ECONOMIZERS FOR GOODMAN / AMANA GPG/ APG GAS PACK 2-5 TON PACKAGE UNITS

**Description:** The PGED 101 & 102 downflow economizers are designed for the Goodman / Amana GPG-/ APG-GAS PACK 2 through 5 ton package units.

These economizers are designed to provide free air conditioning when outside conditions are appropriate. When the outside air is cool and dry enough, the economizer automatically opens to circulate this cool air, thereby eliminating the need to run the air conditioning compressor. This enables the building owner to lower his electrical costs and increase the life of the equipment. If the outside air becomes too warm or humid, the enthalpy control automatically closes the fresh air damper and the compressor begins operation. The economizer is fully modulating and therefore will automatically mix the fresh air and the return air proportionally to get maximum energy savings.

A single or two-stage room thermostat can be utilized to control the unit and the economizer. (Recommend GMC part #'s CHT18-60 for single stage thermostat & CHT90-120 for two-stage thermostat or equivalents). When a single stage thermostat is used, during a call for cooling the enthalpy control automatically selects "free" cooling or mechanical cooling depending on outdoor air conditions. If a two-stage thermostat is used, first stage "free" cooling or mechanical cooling based on outdoor conditions and the enthalpy setting. If the first stage is in the "free" cooling position and does not keep up with the load, the second stage makes (energizes) mechanical cooling. The two-stage thermostat optimizes cooling cost and comfort while taking full advantage of the package unit / economizer combination.

Note: The economizer is not energized in the heating cycle of the heat pump package unit.

#### **Installation:**

1. Uncrate economizer. Inspect for damage.  
(NOTE: Report any damage immediately to the freight company.)
2. CAUTION: OPEN DISCONNECT SWITCH TO PREVENT INJURY!
3. Remove return air cover plate from unit.
4. Remove side access panel from unit.

5. Remove bottom return air panel on the inside of the unit.  
(NOTE: On the 2-3 ½ ton models you will need to remove the blower housing in order to gain access to the panel screws and to install economizer).
6. Slide economizer into side return air opening and make sure the internal damper assembly sits securely over bottom return air opening. Secure with sheetmetal screws.
7. Connect wires from economizer to terminal block per wire diagram.

NOTE: Ensure the wire harness does not interfere with the movement of the dampers during operation. Tie wire harness securely to the wall of the return air compartment.

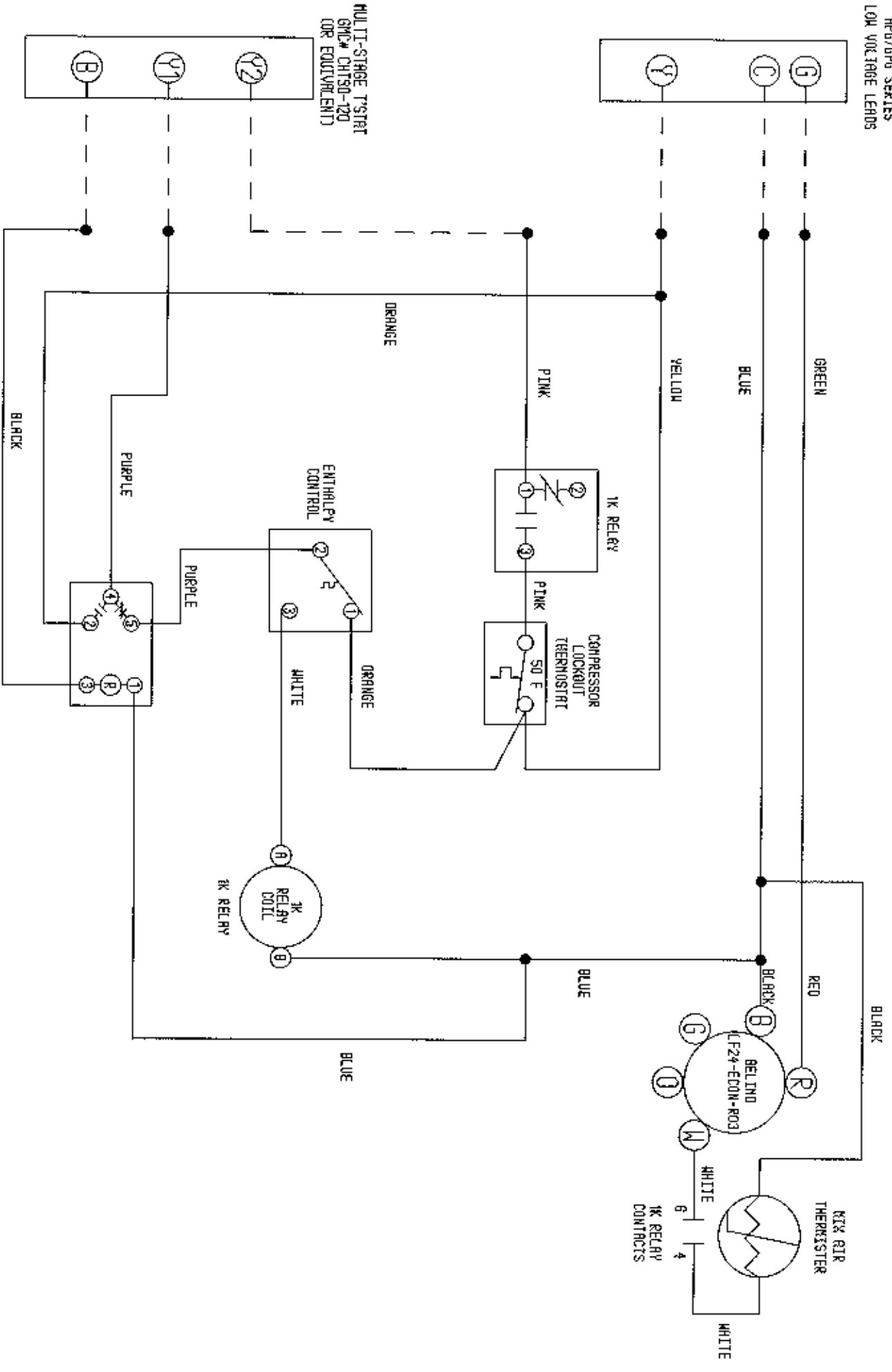
8. Secure hood to the unit with sheet metal screws.
9. Seal-water tight around hood.
10. Close disconnect switch.

NOTE: When using economizer connect Y1 & Y2 on low voltage thermostat leads. (See wiring diagram on unit.)

11. Reset enthalpy and / or minimum position potentiometer if setting other than factory setting is desired. (Access controls through filter door opening.)
12. Check out economizer per control manufacturer's literature.
13. Reinstall fan access plate from Step 3.

NOTE: FILTER CANNOT BE INSTALLED IN UNIT WHEN DOWNFLOW ECONOMIZER IS INSTALLED. FILTER MUST BE PLACED IN RETURN AIR OUTSIDE UNIT.

RPB/6P9 SERIES  
LOW VOLTAGE LEADS



MULTI-STAGE T\*STAT  
GMC# CHT90-120  
(OR EQUIVALENT)

NOTE: RECOMMEND  
MULTI-STAGE T\*STAT  
GMC# CHT90-120  
(OR EQUIVALENT)

GOODMAN MANUFACTURING CO.  
MODEL P6ED101/102  
ROOFTOP UNITS