



**Installation Instructions for PGED-1, -2, -3 & -4  
DOWNFLOW ECONOMIZERS  
FOR GOODMAN PG(B)024-120 PACKAGE UNITS**

**Description:** The PGED-1, -2, -3 & -4 downflow economizers are designed for the Goodman PG(B) 2 through 10 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 and adapter. 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 on side opening of unit and also fan access plate on the side of the unit (PG(B)024-060), or above return air opening (PG090-120).
4. Remove blower support from underneath blower scroll inside return opening.
5. Set block-off plate over left side (facing unit) of bottom return air opening.



Secure with sheetmetal screws. (See illustration below.)

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 the control plug (6 pin male) from economizer to the matching unit plug (6 pin female).

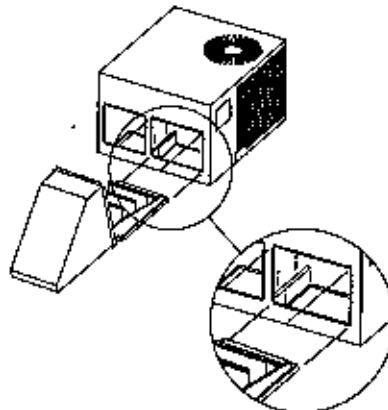
Note: insure the wire harness does not interfere with the movement of the dampers during operation. Tie wire harness securely to the wall of the return air compartment.

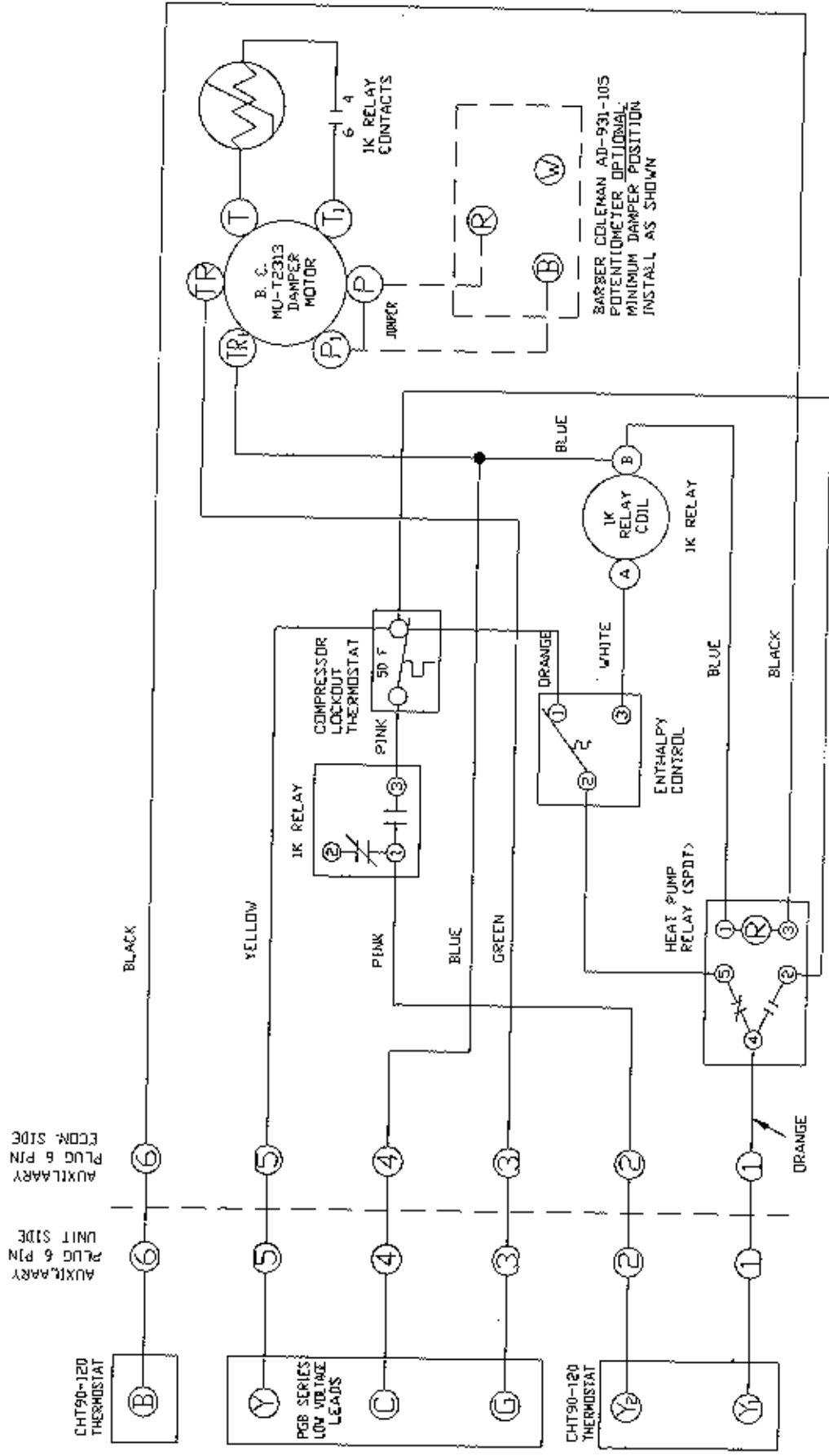
8. Secure hood to unit with sheet metal screws.
9. Seal-water tight around hood.
10. On PGED-4 when used with 460 V package units, the line side of the transformer must be changed from 230 V to 460 V taps.
11. Close disconnect switch.

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

12. Reset enthalpy and / or minimum position potentiometer if setting other than factory setting is desired. (Access controls through filter door opening.)
13. Check out economizer per control manufacturer's literature.
14. 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.**





**NOTE: RECOMMEND**  
**MULTI - STAGE T'STAT**  
**GMC # CHT90-120**  
**(OR EQUIVALENT)**

GOODMAN MANUFACTURING CO.  
 MODEL PGED(H) 1, -2, -3  
 ROOFTOP UNITS  
 PGB & PHB SERIES WIRING DIAGRAM

FACTORY INSTALLED WIRING  
 FIELD INSTALLED WIRING  
 FIELD INSTALLED WIRE NUT

NOTE: ENTHALPY CONTROL & RELAYS SHOWN IN NON-ENERGIZED POSITION  
 NOTE: FOR PGB SERIES THE 'B' TERMINAL AND LEAD IS NOT NEEDED.

PART # PGE-123

McDANIEL METALS CO., INC.  
 1318 BUSCHONG STREET  
 HOUSTON, TEXAS 77039  
 VOICE (713) 987-8400  
 FAX (713) 987-9494