HVAC Economizers 101
Section #4

Economizers on Packaged Rooftop Units
Section #4-Economizers on Packaged Rooftop Units (RTU)

Source: Financial Times Energy
Small Packaged HVAC RTU Systems on Commercial Buildings
Packaged Rooftop Equipment is Available in Many Sizes and Configurations from Multiple Vendors

Source: York, Lennox, Trane
Typical Gas Rooftop Unit

Compressor/Condenser Section

Outside Air

Fan

Gas Furnace and Heat Exchanger

Filter

Supply Air

Return Air

Cooling Coil
Economizers on Rooftop Units
Identify the Major Components

Notice dampers are either normally open (N.O.) or normally closed (N.C.)

Source: York International Corp.
Efficient Packaged Rooftop Equipment Will not Contaminate Fresh Air Intake with Exhaust Air from Building

Source: Platts
Economizers on Packaged RTU
Exercise #4
(Provide Answers below on notes page)

1. What is the position of the following air dampers on an economizer when the AHU is shut down?
   a.) Exhaust Air
   b.) Return Air
   c.) Outside Air

2. T or F RTU units that are enclosed on a roof by walls restrict natural air patterns.

3. T or F Properly designed efficient rooftop units will not allow exhaust air or contaminated air to enter the outside air intake.

4. T or F The air conditioning compressor section is normally on the same side as the outside air economizer dampers.

5. T or F Many replacement rooftop units and new units are ordered without outside air economizers because it saves the customer money upfront during the installation.