

## ***THE MAVERICK “TEC” DUCT DESIGN***

The Maverick Thermal Energy Control is a very effective energy saving device. The duct design for a “TEC” application is very important.

The basic concept of a “TEC” application is to separate a single unit duct system into two separate zones. The “TEC” panel can be attached to the plenum of your air handler or it can be mounted in a remote position of your duct system. Remember that the “TEC” will be controlled by two separate thermostats located in the separate zones.

To design a “TEC” duct system you must take the following steps:

1. Make sure you have a heat load calculation for the job and the grille locations with CFM amounts of the print.
2. Reduce the equipment size by 25% or ½ ton for 3 ton or less.
3. Divide the home into two zones:
  - A. Zone One - Primary or Living Area
  - B. Zone Two - Secondary or Bedroom Area
4. Remember that you must design 85% of your total CFM output to each zone.

(EXAMPLE)

Original Design - 3 Ton System ( 1200 CFM )

“TEC” Design - 2 ½ Ton System ( 1000 CFM )

1000 CFM @ 85% = 850 CFM

Design 850 CFM to Each Zone

5. Show the “TEC” panel locations on your print with notation of each zone outlet. This will give the installers the exact location of the “TEC” panels and make sure which side Zone 1 and Zone 2 will be.
6. Take your total CFM’s originally designed for each zone and divide each into 85% of the total amount of CFM’s available from the new equipment selection. This will give you a factor to multiply into each grille outlet.

(EXAMPLE)

Original Equipment - 3 Ton 1200 CFM

Zone 1 - 700 CFM

Zone 2 - 500 CFM

“TEC” Design - 2 ½ Ton 1000 CFM

Zone 1 - 850 CFM - by 700 = 1.21 Factor

Zone 2 - 850 CFM - by 500 = 1.70 Factor

7. Multiply the factor by each original grille outlet CFM to get the new CFM's for each outlet

(EXAMPLE)

Original - CFM x 1.7 = New 170 CFM

8. Now you are ready to design a duct layout for each area, using the standard “Golden Triangle” duct design.
9. Be sure to increase the grille sizes to accommodate the new CFM's. Also be sure to check the equivalent footage amount to the longest runs.
10. Locate thermostats in areas best suited for customer needs.