

- A. The total fan power index at design conditions of each fan system with total horsepower over 25 horsepower shall not exceed 1.25 watts per cfm of supply air; and
  - B. Individual VAV fans with motors 10 horsepower or larger shall meet one of the following:
    - i. The fan motor shall be driven by a mechanical or electrical variable speed drive.
    - ii. The fan shall be a vane-axial fan with variable pitch blades.
    - iii. For prescriptive compliance, the fan motor shall include controls that limit the fan motor demand to no more than 30% of the total design wattage at 50% of design air volume when static pressure set point equals 1/3 of the total design static pressure, based on certified manufacturer's test data.
  - C. Static Pressure Sensor Location. Static pressure sensors used to control variable air volume fans shall be placed in a position such that the controller set point is no greater than one-third the total design fan static pressure, except for systems with zone reset control complying with 144 (c) 2 D. If this results in the sensor being located downstream of major duct splits, multiple sensors shall be installed in each major branch with fan capacity controlled to satisfy the sensor furthest below its setpoint.
  - D. Set Point Reset. For systems with direct digital control of individual zone boxes reporting to the central control panel, static pressure set point shall be reset based on the zone requiring the most pressure; i.e., the set point is reset lower until one zone damper is nearly wide open.
3. Air-treatment or filtering systems. For systems with air-treatment or filtering systems, calculate the adjusted fan power index using equation 144-A:

EQUATION 144-A ADJUSTED FAN POWER INDEX

Adjusted fan power index = Fan power index x Fan Adjustment

Fan Adjustment =  $1 - (SP_a - 1) / SP_f$

WHERE:

SP<sub>a</sub> = Air pressure drop across the air-treatment or filtering system.

SP<sub>f</sub> = Total pressure drop across the fan.

4. Fan motors of series fan-powered terminal units. Fan motors of series fan-powered terminal units 1 horsepower or less in shall