If the total horsepower of all fans in the system is less than 25 HP, then this should be noted in the FAN DESCRIPTION column and the rest of this section left blank. If the total system horsepower is not obvious, such as when a VAV system has many fan-powered boxes, then this section must be completed.

VAV fans and constant volume fans should be summarized on separate forms.

- **COLUMN A - FAN DESCRIPTION** lists the equipment tag or other name associated with each fan.
- **COLUMN B - DESIGN BRAKE HORSEPOWER** lists the brake horsepower, excluding drive losses, as determined from manufacturer’s data.

For dual-fan, dual-duct systems, the heating fan horsepower may be the (reduced) horsepower at the time of the cooling peak. If unknown, it may be assumed to be 35% of design. If this fan will be shut down during the cooling peak, enter 0 in COLUMN B.

If the system has fan-powered VAV boxes, the VAV box power must be included if these fans run during the cooling peak (i.e. series style boxes). The power of all boxes may be summed and listed on a single line. If the manufacturer lists power consumption in watts, then the wattage sum may be entered directly in COLUMN F. Horsepower must still be entered in COLUMN B if the designer intends to show that total system has less than 25 HP.

- **COLUMNS C & D - EFFICIENCY** lists the efficiency of the MOTOR and DRIVE. The default for a direct drive is 1.0; belt drive is 0.97. If a variable-speed or variable-frequency drive is used, the drive efficiency should be multiplied by that device’s efficiency.
- **COLUMN E - NUMBER OF FANS** lists the number of identical fans included in this line.
- **COLUMN F - PEAK WATTS** is calculated as:

\[
((\text{BHP} \times \text{Number of Fans} \times 746W/\text{HP}) / (\text{Motor Efficiency}, E_m \times \text{Drive Efficiency}, E_d))
\]

where \(\text{BHP}\) (COLUMN B) is the design brake horsepower as described above, \(E_m\) (COLUMN C) and \(E_d\) (COLUMN D) are the efficiency of the motor and the drive, respectively.

**Totals and Adjustments**

- **TOTALS FANS SYSTEMS POWER** is the sum of all PEAK WATTS from (COLUMN F). Enter sum in provided box on the right.
- **SUPPLY DESIGN AIRFLOW (CFM)** Enter sum in provided box at the right (under COLUMN F) to identify the design airflow of the system.
- **TOTAL FAN SYSTEM POWER INDEX, W/cfm** is calculated by dividing the total PEAK WATTS (COLUMN F) by the total cfm. To