# HVAC MISC. PRESCRIPTIVE REQUIREMENTS: MECH-4-C

| PROJECT NAME | | DATE | |
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**FAN POWER CONSUMPTION §144(c)**

**NOTE:** Provide one copy of this worksheet for each fan system with a total fan system horsepower greater than 25 hp for Constant Volume Fan Systems or Variable Air Volume (VAV) Systems when using the Prescriptive Approach.

| A | B | C | D | E | F |
|---|---|---|---|---|---|
| | | EFFICIENCY | | | |
| **FAN DESCRIPTION** | **DESIGN BRAKE HP** | **MOTOR** | **DRIVE** | **NUMBER OF FANS** | **PEAK WATTS B x E x 746 / (C x D)** |
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| | **Total Adjustments** | | |
| FILTER PRESSURE ADJUSTMENT Equation. 144-A | 1) Total Fan System Power (Peak Watts, Sum of Column F) | | |
| A) If filter pressure drop is greater than 1 inch W. C. enter filter pressure drop. $SP_a$ on line 4 and Total Fan pressure $SP_f$ on Line 5. | 2) Supply Design Airflow (CFM) | | |
| | 3) Total Fan System Power Index (Row1/Row2)[1] W/cfm | | |
| B) Calculate Fan Adjustment and enter on line 6. | 4) $SP_a$ | | |
| | 5) $SP_f$ | | |
| C) Calculate Adjusted Fan Power Index and enter on Row 7 | 6) Fan Adjustment = $1-(SP_a - 1)/SP_f$ | | |
| | 7) Adjusted Fan Power Index (Line 3 x Line 6)[1] W/cfm | | |

1. TOTAL FAN SYSTEM POWER INDEX or ADJUSTED FAN POWER INDEX must not exceed 0.8 w/cfm, for Constant Volume systems or 1.25 w/cfm for VAV systems

| ***ITEM or SYSTEM TAG(S)*** | | | | |
|---|---|---|---|---|
| **PRESCRIPTIVE MEASURES** | ***T-24 Section*** | **Capacity** | **Exception** | ***Notes*** |
| Electric Resistance Heating[1] | §144 (g) | | | |
| Heat Rejection System[2] | §144 (h) | | | |
| Air Cooled Chiller Limitation[3] | §144 (i) | | | |

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| 1. Total installed capacity (MBtu/hr) of all electric heat on this project exclusive of electric auxiliary heat for heat pumps. If electric heat is used explain which exception(s) to §144(g) apply. |
| 2. Are centrifugal fan cooling towers used on this project? (Enter "Yes" or "No") If centrifugal fan cooling towers are used explain which exception(s) to §144(h) apply. |
| 3. Total installed capacity (tons) of all chillers and air cooled chillers under this permit, If there are more than 100 tons of air-cooled chiller capacity being installed explain which exception(s) to §144(i) apply. |
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