

**7.4.3 Efficiency Standards for Commercial Air Conditioners and Heat Pumps (1)**

| <u>Type</u>   | <u>Cooling Capacity (Btu/hr)</u> | <u>Category (2)</u> | <u>Efficiency Level</u> |
|---|----------------------------------|---------------------|-------------------------|
| Small commercial package air conditioning and heating equipment (air-cooled, three-phase)                     | <65,000                          | AC                  | SEER = 13.0             |
|   |                                  | HP                  | SEER = 13.0             |
| Single package vertical air conditioners and single package vertical heat pumps, single-phase and three phase | <65,000                          | AC                  | EER = 9.0               |
|   |                                  | HP                  | EER = 9.0, COP = 3.0    |
| Single package vertical air conditioners and single package vertical heat pumps                               | ≥65,000 and <135,000             | AC                  | EER = 8.9               |
|   |                                  | HP                  | EER = 8.9, COP = 3.0    |
| Single package vertical air conditioners and single package vertical heat pumps                               | ≥135,000 and <240,000            | AC                  | EER = 8.6               |
|   |                                  | HP                  | EER = 8.6, COP = 2.9    |
| Small commercial package air-conditioning and heating equipment (air-cooled)                                  | ≥65,000 and <135,000             | AC                  | EER = 11.2 (3)          |
|   |                                  |                     | EER = 11.0 (4)          |
|   |                                  | HP                  | EER = 11.0 (3)          |
| Large commercial package air-conditioning and heating equipment (air-cooled)                                  | ≥135,000 and <240,000            |                     | EER = 10.8 (4)          |
|   |                                  | AC                  | EER = 11.0 (3)          |
|   |                                  | HP                  | EER = 10.6 (3)          |
| Very large commercial package air-conditioning and heating equipment (air-cooled)                             | ≥240,000 and <760,000            |                     | EER = 10.4 (4)          |
|   |                                  | AC                  | EER = 10.0 (3)          |
|   |                                  | HP                  | EER = 9.8 (4)           |
| Small commercial package air-conditioning heat pump   | ≥65,000 and <135,000             |                     | EER = 9.5 (3)           |
|   |                                  | HP                  | EER = 9.3 (4)           |
| Large commercial package air-conditioning heat pump   | ≥135,000 and <240,000            | HP                  | COP = 3.3               |
| Very large commercial package air-conditioning heat pump  | ≥240,000 and <760,000            | HP                  | COP = 3.2               |

Note(s): EER = Energy Efficiency Ratio, COP = Coefficient of Performance. 1) Effective for products manufactured on or after January 1, 2010, except for air-cooled, three-phase small commercial package air-conditioning and heating equipment <65,000 Btu/hr for which standards are effective for products manufactured on or after June 16, 2008. 2) AC = Air Conditioner, HP = Heat Pump. 3) Applies to equipment with electric resistance heating or no heating. 4) Applies to equipment with all other integrated heating-system types.

Source(s): Title 10, Code of Federal Regulations, Part 431 - Energy Efficiency Program for Certain Commercial and Industrial Equipment, Subpart F - Commercial Air Conditioners and Heat Pumps. January 1, 2010.