HVAC Efficiency Requirements

TVA EnergyRight for Business & Industry

PACKAGED TERMINAL HEAT PUMPS & AIR CONDITIONERS (PTHP/PTAC)

Capacity (Btu/h)	Minimum Efficiency Levels	
	EER	COP
6,000	11.9	3.3
7,000		
8,000	11.6	
9,000	11.3	3.2
10,000	11	
11,000	10.7	3.1
12,000	10.4	
13,000	10.1	3.0
14,000	9.8	
15,000	9.5	2.9
16,000		
17,000		
18,000		

VARIABLE REFRIGERANT MULTI-SPLIT HEAT PUMPS

Size (Btu/h)	System Type	Minimum Efficiency Levels					
		SEER	SEER2	IEER	COP*	HSPF	HSPF2
< 65,000 Btu/h (single-phase)	Multi-split System	14	13.3			8	6.8
≥ 65,000 Btu/h and < 135,000 Btu/h				14.1	3.4		
≥ 135,000 Btu/h and < 240,000 Btu/h				13.5	3.3		
≥ 240,000 Btu/h and < 760,000 Btu/h				12.5	3.2		

UNITARY HEAT PUMPS

Size (Btu/h)	System Type	Minimum Efficiency Levels					
		SEER	SEER2	IEER	COP*	HSPF	HSPF2
< 65,000 Btu/h (single-phase)	Split System	14	13.3			8	6.8
	Single Package	14	13.3			8	6.7
≥ 65,000 Btu/h and < 135,000 Btu/h	Split System & Single Package			14.1	3.4		
≥ 135,000 Btu/h and < 240,000 Btu/h				13.5	3.3		
≥ 240,000 Btu/h and < 760,000 Btu/h				12.5	3.2		

All Non-CEE Advanced Tier HVAC units must exceed deemed program efficiency requirement tables on pages 1 - 2. Any CEE Advanced Tier HVAC units must meet or exceed deemed program efficiency requirement tables on page 2. Except for air-cooled chillers, equipment must exceed only one of the efficiency categories listed in the efficiency standards tables, based on the size of the unit.

All equipment must meet AHRI standards (210/240, 320 or 340/360), be listed by a Nationally Recognized Testing Laboratory (ETL, UL, etc.), and use a minimum ozone depleting refrigerant (e.g., HCFC or HFC).

*Many heat pumps list two COP ratings: one which applies to an outdoor temperature of 47° Fdb and 43° Fwb and another which applies to an outdoor temperature of 17°Fdb and 15°Fwb. The COP stanard listed in the table applies only to the COP rating at an outdoor temperature of 47°Fdb and 43°Fwb.

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UNITARY A/C UNITS - CEE ADVANCED TIER

Size (Ton)	Size (kBtu/h)	System Type	Minimum Efficiency Levels			
			SEER	SEER2	IEER	EER
< 5.4	< 65	Split System	18	17.1		13
< 5.4	< 65	Single Package	17	16.3		12.5
≥ 5.4 to < 11.25	≥ 65 to < 135	Split System & Single Package			18	12.6
≥ 11.25 to < 20	≥ 135 to < 240				17	12.2
≥ 20 to < 63.3	≥ 240 to < 760				14.5	10.8

Any CEE Advanced Tier HVAC units must meet or exceed deemed program efficiency requirement tables on page 2.

All equipment must meet AHRI standards (210/240, 320 or 340/360), be listed by a Nationally Recognized Testing Laboratory (ETL, UL, etc.), and use a minimum ozone depleting refrigerant (e.g., HCFC or HFC).

HIGH EFFICIENCY AIR-COOLED CHILLERS

Size (Ton)	Full-Load Optimized Applications (Path A)		Part-Load Optimized Applications (Path B)	
	EER	IPLV	EER	IPLV
< 150	10.1	13.7	9.7	15.8
≥ 150	10.1	14.0	9.7	16.1

High efficiency air-cooled chillers may go through path A or B, but must meet or exceed both efficiency requirements.

UNITARY A/C UNITS

Size (Ton)	Size (kBtu/h)	System Type	Minimum Efficiency Levels		
			SEER	SEER2	IEER
< 3.75	< 45	Split System	14	13.3	
< 3.75	< 45	Single Package	14	13.4	
≥ 3.75 to < 5.4	≥ 45 to < 65	Split System & Single Package	14	13.4	
≥ 5.4 to < 11.25	≥ 65 to < 135				14.8
≥ 11.25 to < 20	≥ 135 to < 240				14.2
≥ 20 to < 63.3	≥ 240 to < 760				13.2
≥ 63.3	≥ 760				12.5

All Non-CEE Advanced Tier HVAC units must exceed deemed program efficiency requirement tables on pages 1 - 2. Any CEE Advanced Tier HVAC units must meet or exceed deemed program efficiency requirement tables on page 2. Except for air-cooled chillers, equipment must exceed only one of the efficiency categories listed in the efficiency standards tables, based on the size of the unit.

All equipment must meet AHRI standards (210/240, 320 or 340/360), be listed by a Nationally Recognized Testing Laboratory (ETL, UL, etc.), and use a minimum ozone depleting refrigerant (e.g., HCFC or HFC).

*Many heat pumps list two COP ratings: one which applies to an outdoor temperature of 47° Fdb and 43° Fwb and another which applies to an outdoor temperature of 17°Fdb and 15°Fwb. The COP stanard listed in the table applies only to the COP rating at an outdoor temperature of 47°Fdb and 43°Fwb.