



**Gas- and Oil-Fired Central Furnaces – Minimum Heating Efficiencies**

Appliance	Rated Input (Btuh)	Minimum Efficiency (%)	
		AFUE	Thermal Efficiency
Weatherized gas central furnaces with single phase electrical supply	<225,000	81%	—
Non-weatherized gas and oil central furnaces with single phase electrical supply	<225,000	80%	—
Weatherized oil central furnaces with single phase electrical supply	<225,000	78%	—
Non-weatherized oil central furnaces with single phase electrical supply	<225,000	83%	—
Gas central furnaces	≥225,000	—	80%
Oil central furnaces	≥225,000	—	81%

Table 4-1 of 2016 Residential Compliance Manual (based on the California Appliance Efficiency Regulations Title 20, Tables E-4 and E-6)

**Heat Pump – Minimum Heating Efficiencies**

Single-phase air source heat pumps

Configuration	Size (Btuh)	Minimum Heating Efficiency
Packaged	<65,000 Cooling Capacity	8.0 HSPF
Split	<65,000 Cooling Capacity	8.2 HSPF
Space-constrained packaged	<65,000 Cooling Capacity	7.4 HSPF
Space-constrained split	<65,000 Cooling Capacity	7.4 HSPF
Small Duct High Velocity	<65,000 Cooling Capacity	7.7 HSPF

Note – HSPF: Heating Season Performance Factor

Adapted from Table 4-3 of 2016 Residential Compliance Manual (based on Title 20)

## (Smaller) Central Air Conditioners and Heat Pumps — Minimum Cooling Efficiencies

Appliance	Type	Size (Btuh)	SEER Effective 1/1/2015	EER Effective 1/1/2015
Central Air Conditioners <sup>A</sup>	Split System	< 45,000	14.0	12.2
		≥ 45,000 and < 65,000	14.0	11.7
	Single Package	< 65,000	14.0	11.0
Central Air Source Heat Pumps	Split System	< 65,000	14.0	NR
	Single Package	< 65,000	14.0	NR
Space Constrained Air Conditioner	Split System	< 65,000	12.0	NR
	Single Package	< 65,000	12.0	NR
Space Constrained Heat Pump	Split System	< 65,000	12.0	NR
	Single Package	< 65,000	12.0	NR
Small Duct, High Velocity Air Conditioner	All	< 65,000	12.0	NR
Small Duct, High Velocity Heat Pump	All	< 65,000	12.0	NR

Adapted from Table 4-6 from 2016 Residential Compliance Manual (based on Title 20 Table C-2 and Federal Appliance Standards)

A. Central split system air conditioners and central single package air conditioners installed on or after January 1, 2015 must comply with the minimum SEER and EER requirements of Table 4-6 in the Residential Compliance Manual regardless of date of manufacturer.

## Federally Regulated Residential Water Heaters — Minimum Domestic Hot Water (DHW) Efficiencies

Product Class	Rated Storage Volume	Energy Factor (EF)
Gas-fired Water Heater	≥ 20 gal and ≤ 55 gal	$0.675 - (0.0015 * V_s)$
	> 55 gal and ≤ 100 gal	$0.8012 - (0.00078 * V_s)$
Oil-fired Water Heater	≤ 50 gal	$0.68 - (0.0019 * V_s)$
Electric Water Heater <sup>1</sup>	≥ 20 gal and ≤ 55 gal	$0.96 - (0.0003 * V_s)$
	> 55 gal and ≤ 120 gal	$2.057 - (0.00113 * V_s)$
Tabletop Water Heater	≥ 20 gal and ≤ 100 gal	$0.93 - (0.00132 * V_s)$
Instantaneous Gas-fired Water Heater	< 2 gal	$0.82 - (0.0019 * V_s)$
Instantaneous Electric Water Heater	< 2 gal	$0.93 - (0.00132 * V_s)$
Grid-Enabled Water Heaters	> 75 gal	$1.061 - (0.00168 * V_s)$

Note –  $V_s$ : Rated Storage Volume – the water storage capacity of a water heater (in gallons).

<sup>1</sup> For electric storage water heaters > 55 gallons, the efficiency level suggests performance comparable to a heat pump water heater.

From Table 5-4 of the 2016 Residential Compliance Manual (per U.S. Department of Energy)



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