Residential Heating & Cooling Equipment Minimum Efficiencies

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

	Rated	Minimum Efficiency (%)	
Appliance		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 2019 Residential Compliance Manual (based on the California Appliance Efficiency Regulations Title 20, Tables E-5 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	7.2 HSPF			
Note – HSPF: Heating Season Performance Factor					

Adapted from Table 4-3 of 2019 Residential Compliance Manual (based on Title 20)



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

Appliance	Туре	Size (Btuh)	SEER Effective 1/1/2015	EER Effective 1/1/2015
Central Air Conditioners	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 2019 Residential Compliance Manual (based on Title 20 Table C-3 and Federal Appliance Standards)

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

Product Class	Rated Storage Volume/Input Rating (if applicable)	Draw Pattern	Uniform Energy Factor (UEF) Minimum Requirement
Gas-fired Storage Water Heater (≥20 gal and ≤ 55 gal)	40 gallon	Medium	0.5803
	50 gallon		0.5633
	40 gallon	High	0.64
	50 gallon		0.627
Gas-fired Storage Water Heater (>55 gal and ≤ 100 gal)	60 gallon	Medium	0.7657
	70 gallon		0.7617
	80 galllon		0.7577
	90 gallon		0.7537
	100 gallon		0.7497
	60 gallon	High	0.7892
	70 gallon		0.7862
	80 gallon		0.7832
	90 gallon		0.7802
	100 gallon		0.7772
Instantaneous Gas-fired Water Heater	<2 gal and > 50,000 Btuh	Low/Medium/High	0.81
Instantaneous Electric Water Heater	<2 Gal	Very Small/Low/Medium	0.91
Grid-enabled Water Heater	80 gallon	High	0.916
	90 gallon		0.909
	100 gallon		0.902
Note – Vr= Rated Storage Volume – the		ater heater (in gallons).	

From Table 5-4 of the 2019 Residential Compliance Manual (per U.S. Department of Energy)









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