

Green Future: EE-8

High-Energy Factor Water Heater (beyond ENERGY STAR)

ENERGY STAR

http://www.energystar.gov/index.cfm?c=boilers.pr_crit_boilers

Boilers Key Product Criteria

Equipment	Specification
Boilers	Rating of 85% AFUE* or greater (About 6% more efficient than the minimum federal standards.)

ENERGY STAR partner agrees to sell one or more specific models of boilers that meet or exceed 85 percent AFUE energy efficiency ratings.

Residential Boiler: A self contained fuel burning appliance of less than 300,000 Btuh energy input, for supplying low pressure steam or hot water for space heating applications. A heating unit that meets this definition and also provides hot water for domestic or other use is considered a boiler.

Combination Space-Heating and Water Heating Appliance: Appliance that provides both space conditioning (boiler) and hot water heating with one appliance or energy source. The combination appliance circulates hot water from the water heater through a heat exchanger in the air handler. A blower will move the heated air through a standard duct system. In the summer, an air conditioner is connected to the exchanger and the system functions similarly, with cool air being pushed through the ductwork.

AFUE:

The Annual Fuel Utilization Efficiency (AFUE) measures the amount of fuel converted to space heat in proportion to the amount of fuel entering the boiler. This is commonly expressed as a percentage. The efficiency of a boiler shall be measured using AFUE. Test procedures have been developed to test AFUE by the Department of Energy (DOE). These procedures are specified in 10 CFR part 430.

CAafue:

The Combined Appliance Annual Fuel Utilization Efficiency (“CAafue”) is the effective efficiency of the combined appliance in performing the function of space heating. When the primary heating source of the combined appliance is a residential boiler, the CAafue is the same as the AFUE of the boiler as determined by DOE test procedures specified in 10 CFR 430.

Boilers Information Resources

Residential vs. Commercial

http://www.energystar.gov/index.cfm?c=boilers.pr_res_boilers

Residential: models with energy input less than 300,000 Btuh, and that use a single-phase electric supply. Minimum efficiency levels for this equipment are established by the National Appliance Energy Conservation Act (NAECA). The energy-efficiency metric for residential models is: Annual Fuel Utilization Efficiency (AFUE).

Non-residential: models with energy input equal to or greater than 300,000 Btuh that use a single-phase electric supply, and all models that require a three-phase electric supply. Minimum efficiency levels for this equipment are established by the Energy Policy Act of 1992 (EPA). The energy-efficiency metric for non-residential models is: Thermal Efficiency (TE).

Information Source (1 of 3): List of ENERGY STAR qualified boilers (end p.12).

http://www.energystar.gov/ia/products/prod_lists/boilers_prod_list.xls

Boilers Product List (by AFUE Rating)

List Current as of December 1, 2007

Brand Name	Model Name	Boiler Type	Fuel Type	AFUE Rating (initial)	AFUE Rating (range)	Model Number
Northshore Welding	Raves Boiler	Steam	Gas	85		S4 (Gas, Steam)
Northshore Welding	Raves Boiler	Steam	Gas	85		S6 (Gas, Steam)
Northshore Welding	Raves Boiler	Steam	Oil	85		S4 (Oil, Steam)
Northshore Welding	Raves Boiler	Steam	Oil	85		S6 (Oil, Steam)
BIASI, SpA	B10 Series	Water		85	85.0-85.8	B3-B9
Buderus Hydronic Systems	Buderus	Water	Gas	85		GA244 - models 37,44
Buderus Hydronic Systems	Gas Boilers	Water	Gas	85		G124x/DI/18, /25, /32
Buderus Hydronic Systems	Gas Boilers	Water	Gas	85	85.0-85.2	GA124/17, /23, 30
Burnham Hydronics	PVG	Water	Nat/LP Gas	85	85-85.5%	PVG3, PVG4, PVG5, PVG6, PVG7
Burnham Hydronics	SCG	Water	Nat/LP Gas	85	85-85.5%	SCG3, SCG4, SCG5, SCG6, SCG7
Burnham Hydronics	V8	Water	Oil	85	85-86.3	V83W, V84W, V85W, V86W, V87W
Columbia Boiler	LV & LVD Series	Water	Oil	85		LV-125, LVD-125
Columbia Boiler	WB & WB-DV Series	Water	Oil	85		WB-125, WB-125 DV
Columbia Boiler Company	Emerald Series	Water	Oil	85		EM 3125
Columbia Boiler Company	LV Series	Water	Oil	85		LV 125
Columbia Boiler Company	Solaia Series	Water	Oil	85		SL7175
Columbia Boiler Company	WB Series	Water	Oil	85		WB 125
Columbia Boiler Company	WB-II Series	Water	Oil	85		WB 165
De Dietrich Thermique	DTG 120 A Eco. Nox Series	Water	Gas	85		DTG 120-10
De Dietrich Thermique	DTG 120 A Eco. Nox Series	Water	Gas	85		DTG 125A
De Dietrich Thermique	DTG 120 A Eco. Nox Series	Water	Gas	85		DTG 127 A
Dunkirk Boilers	EV Series	Water	Gas	85		DPFG-3T, 4T, 5T, 6T, 8T
Energy Kinetics	System 2000	Water	Gas	85	85-86	EK-1, EK-1-DV, EK-2, EK-2-DV
New Yorker Boiler Co	FR-HGS II	Water	Oil	85		FR-HGS II
Northshore Welding	Raves Boiler	Water	Gas	85		S4 (Gas, Water)
Northshore Welding	Raves Boiler	Water	Gas	85		S6 (Gas, Water)
Northshore Welding	Raves Boiler	Water	Oil	85		S4 (Oil, Water)

Northshore Welding	Rayes Boiler	Water	Oil	85		S6 (Oil, Water)
NTI	Odyssey	Water	Oil	85		CT120
NTI	Odyssey	Water	Oil	85		CT250
NTI	Odyssey	Water	Oil	85		VS100
NTI	Odyssey	Water	Oil	85		VS90
Peerless (P.B. Heat)	PDE	Water	Gas	85		PDE-03, PDE-04, PDE-05
Peerless (P.B. Heat)	Peerless Series PSC II	Water	Gas	85		PSCII-04-WPC
Peerless (P.B. Heat)	Peerless Series PSC II	Water	Gas	85		PSCII-05-WPC
Pure Pro	Trio	Water	Oil	85		P3, P3D
Pure Pro	Trio	Water	Oil	85		P7
Quietside	QVM8-OL	Water	Oil	85		QVM8-085/120/150 OL
Thermo-Dynamics Boiler Company	CWL Series	Water	Oil	85		CWL-85, CWL-85 DV
Thermo-Dynamics Boiler Company	HT & HT-DV Series	Water	Oil	85		HT-125, HT-125 DV
Thermo-Dynamics Boiler Company	LM & LM-DV Series	Water	Oil	85		LM-125
Ultimate	Ultimate Products	Water	Gas	85		PFG-3T, 4T, 5T, 6T, 8T
Weil-McLain	WGO	Water	Oil	85		WGO-4
Weil-McLain	WGO	Water	Oil	85		WGO-5
Weil-McLain	WGO	Water	Oil	85		WGO-6
Weil-McLain	WGO	Water	Oil	85		WGO-7
Weil-McLain	WTGO	Water	Oil	85		WTGO-4
Weil-McLain	WTGO	Water	Oil	85		WTGO-5
Weil-McLain	WTGO	Water	Oil	85		WTGO-6
Weil-McLain	WTGO	Water	Oil	85		WTGO-7
Axeman-Anderson Co.	Axeman-Anderson Boilers			85	85.0-88.7	NPO Series: 74NPO, 87NPO, 108NPO, 128NPO; 74NPO-U, 87NPO-U, 108NPO-U, 128NPO-U
Slant/Fin Corporation	XL-2000			85		XL-30, XL-40, XL-50
Burnham Hydronics	V8	Steam	Oil	85.1	85.1-85.7	V83S, V84S, V85S, V86S
Hydrotherm	PB Series	Steam	Oil	85.1	85.1-86.2	PB-S-3(T)
Hydrotherm	PB Series	Steam	Oil	85.1	85.1-86.2	PB-S-4(T)
Hydrotherm	PB Series	Steam	Oil	85.1	85.1-86.2	PB-S-5(T)
Hydrotherm	PB Series	Steam	Oil	85.1	85.1-86.2	PB-S-6(T)
Hydrotherm Boilers	PB Series	Steam	Oil	85.1	85.1-86.2	PB-S-3(T), PB-S-4(T), PB-S-5(T), PB-S-6(T)
Peerless (P.B. Heat)	EC/ECT	Steam	Oil	85.1		EC/ECT-04- 1.25 gph
Smith Boilers	8 series	Steam	Oil	85.1	85.1-86.2	8-S-3(T)
Smith Boilers	8 series	Steam	Oil	85.1	85.1-86.2	8-S-4(T)
Smith Boilers	8 series	Steam	Oil	85.1	85.1-86.2	8-S-5(T)
Smith Boilers	8 series	Steam	Oil	85.1	85.1-86.2	8-S-6(T)
BIASI, SpA	BIASI SG	Water		85.1	85.1-87.8	SG2-SG6

Columbia Boiler Company	WB Series	Water	Oil	85.1		WB 90, WB 90 DV
Crown Boiler Co.	Cabo II	Water	Gas	85.1	85.1- 85.3	CWD060, CWD083, CWD110, CWD138, CWD165, CWD193, CWD220, CWD245
EFM	PK 400 Series	Water	Oil	85.1		0.50 GPH
EFM	VT 700 Series	Water	Oil	85.1		0.65 GPH
Hydrotherm	PB Series	Water	Oil	85.1	85.1-86.2	PB-W-3(T)
Hydrotherm	PB Series	Water	Oil	85.1	85.1-86.2	PB-W-4(T)
Hydrotherm	PB Series	Water	Oil	85.1	85.1-86.2	PB-W-5(T)
Hydrotherm	PB Series	Water	Oil	85.1	85.1-86.2	PB-W-6(T)
Hydrotherm Boilers	PB Series	Water	Oil	85.1	85.1-86.2	PB-W-3(T), PB-W-4(T), PB-W-5(T), PB-W-6(T)
New Yorker Boiler Co	CL Series	Water	Oil	85.1		CL3-105
New Yorker Boiler Co	FR-122-W	Water	Oil	85.1		FR-122-W
New Yorker Boiler Co	FR-232-W	Water	Oil	85.1		FR-232-W
NTI	Odyssey	Water	Oil	85.1		C340
Peerless (P.B. Heat)	Peerless Series PSC II	Water	Gas	85.1		PSCII-06-WPC
Pensotti	Heatline	Water	Oil	85.1		DK2-3
Slant/Fin Corporation	Victory	Water	Gas	85.1		VSPH-180
Smith Boilers	8 series	Water	Oil	85.1	85.1-86.2	8-W-3(T)
Smith Boilers	8 series	Water	Oil	85.1	85.1-86.2	8-W-4(T)
Smith Boilers	8 series	Water	Oil	85.1	85.1-86.2	8-W-5(T)
Smith Boilers	8 series	Water	Oil	85.1	85.1-86.2	8-W-6(T)
Smith Cast Iron Boilers	8 Series	Water	Oil	85.1	85.1-86.2	8-W-3(T), 8-W-4(T), 8-W-5(T), 8-W-6(T)
Thermo-Dynamics Boiler Company	HT & HT-DV Series	Water	Oil	85.1		HT 90, HT 90 DV
Thermo-Dynamics Boiler Company	S Series	Water	Oil	85.1		STR-110
Axeman-Anderson Co.	Axeman-Anderson Boilers			85.1	85.1-86.7	Vesta Series: PVT models 105B, 119B, 119H-189H
Bryant Heating & Cooling Systems	BW4/BW5 Series Oil-Fired Boilers	Water	Oil	85.2	85.2 - 86.	BW4/5 Series - Input sizes -91, -105, -126, -168
Carrier	BW4/BW5 Series Oil-Fired Boilers	Water	Oil	85.2	85.2 - 86.	BW4/5 Series - Input sizes -91, -105, -126, -168
Columbia Boiler Company	LV and LV-DV Series	Water	Oil	85.2		LV-75, LV-75 DV
Dunkirk Boilers	Empire Series	Water	Oil	85.2	85.2 -86.5	3EW.65T, 3EW.75T, 3EW.65Z, 3EW.75Z
Dunkirk Boilers	Empire Series	Water	Oil	85.2	85.2 -86.5	4EW.90T, 4EW.90Z
Dunkirk Boilers	Empire Series	Water	Oil	85.2	85.2 -86.5	4EW1.25T, 4EW1.50T, 4EW1.25Z, 4EW1.50Z
Dunkirk Boilers	Empire Series	Water	Oil	85.2	85.2-86.5	5EW1.20T, 5EW1.20Z
EFM	PK 440 Series	Water	Oil	85.2		1.10 GPH
EFM	VT 1000 Series	Water	Oil	85.2		1.10 GPH

Newmac		Water	Oil	85.2		NBR-105
Newmac		Water	Oil	85.2		NBR-113
Newmac		Water	Oil	85.2		NBR2-105
Newmac		Water	Oil	85.2		NBR2-113
NTI	Odyssey	Water	Oil	85.2		C305
NTI	Odyssey	Water	Oil	85.2		CT150
Peerless (P.B. Heat)	EC/ECT	Water	Oil	85.2		EC/ECT-04- 1.50 gph
Peerless (P.B. Heat)	EC/ECT	Water	Oil	85.2		EC/ECT-05- 2.00 gph
Peerless (P.B. Heat)	PRO Series	Water	Oil	85.2		PRO-04-100
Peerless (P.B. Heat)	PRO Series	Water	Oil	85.2		PRO-05-125
Slant/Fin Corporation	Victory	Water	Gas	85.2		VSPH-150
Takagi	Flash T-H1	Water	Gas	85.2		25000150
Thermo-Dynamics Boiler Company	LM & LM-DV Series	Water	Oil	85.2		LM-75, LM-75 DV
Thermo-Dynamics Boiler Company	S Series	Water	Oil	85.2		STR-85
Triangle Tube	Delta	Water	Gas	85.2	85.2-86.0	PG PLUS-25, 30, 35, 40, 45, 150, 199
Peerless (P.B. Heat)	WBV	Steam	Oil	85.3		WBV-04-1.25gph
Newmac		Water	Oil	85.3		NBR-122V
Newmac		Water	Oil	85.3		NBR2-122V
Peerless (P.B. Heat)	EC/ECT	Water	Oil	85.3		EC/ECT-03- 1.00 gph
Weil-McLain	CGS	Water	Gas	85.3		CGs-3
Weil-McLain	WGO	Water	Oil	85.3		WGO-3
Weil-McLain	WTGO	Water	Oil	85.3		WTGO-3
Axeman-Anderson Co.	Axeman-Anderson Boilers			85.3	85.3-88.1	Olympia I Series: Models OL-91, OL-119, GL-91
Peerless (P.B. Heat)	EC/ECT	Steam	Oil	85.4		EC/ECT-03- .75 gph
EFM	SPK 600 Series	Water	Oil	85.4		1.35 GPH
Newmac		Water	Oil	85.4		NBR-109
Newmac		Water	Oil	85.4		NBR-111
Newmac		Water	Oil	85.4		NBR-126V
Newmac		Water	Oil	85.4		NBR2-109
Newmac		Water	Oil	85.4		NBR2-111
Newmac		Water	Oil	85.4		NBR2-126V
Peerless (P.B. Heat)	PRO Series	Water	Oil	85.4		PRO-03-060
Peerless (P.B. Heat)	WBV	Water	Oil	85.4		WBV-04-1.25gph
Thermo-Dynamics Boiler Company	S Series	Water	Oil	85.4		STR-100
Thermo-Dynamics Boiler Company	SPK 600 Series	Water	Oil	85.4		1.35 GPH
Viessmann	Vitogas 100	Water	Gas	85.4	85.4 - 85.	GS1-22 through GS1-60
American Standard	APFWF	Water	Oil	85.5	85.5-86.7	All models beginning with APFWF
Columbia Boiler Company	Casco Bay CBX	Water	Oil	85.5		CBX 125WC, CBX 125WC-DV

Columbia Boiler Company	Emerald Series	Water	Oil	85.5		EM 3100
Columbia Boiler Company	Solaia Series	Water	Oil	85.5		SL375
EFM	PK 440 Series	Water	Oil	85.5		1.00 GPH
LAARS Heating Systems Company	Endurance	Water	Gas	85.5		ED
LAARS Heating Systems Company	Pennant	Water	Gas	85.5		PNCH
NTI	Odyssey	Water	Oil	85.5		C250
Peerless (P.B. Heat)	WV	Water	Oil	85.5		WV-05-1.75gph
Slant/Fin Corporation	Victory	Water	Gas	85.5		VSPH-120
Thermo-Dynamics Boiler Company	TDX Series	Water	Oil	85.5		TDX 125WC, TDX 125WC-DV
Trane	TPFWF	Water	Oil	85.5	85.5-86.7	All models beginning with TPFWF
Baxi	Luna Wall Hung Boiler		Gas	85.5		Luna 131 FI
Baxi	Luna Wall Hung Boiler		Gas	85.5		Luna 310 Fi
Peerless (P.B. Heat)	EC/ECT	Steam	Oil	85.6		EC/ECT-05- 1.75 gph
Columbia Boiler Company	WB-II Series	Water	Oil	85.6		WB 175
EFM	SPK 600 Series	Water	Oil	85.6		1.25 GPH
NTI	Odyssey	Water	Oil	85.6		CT230
Pensotti	Heatline	Water	Oil	85.6		DK2-5
Thermo-Dynamics Boiler Company	HT-II Series	Water	Oil	85.6		HT-175
Thermo-Dynamics Boiler Company	SPK 600 Series	Water	Oil	85.6		1.25 GPH
Ambassador	Axia 29E	Water	Gas	85.7		Axia 29E
EFM	SPK 600 Series	Water	Oil	85.7		1.10 GPH
New Yorker Boiler Co	CL Series	Water	Oil	85.7		CL5-168
NTI	Odyssey	Water	Oil	85.7		C275
Slant/Fin Corporation	Victory	Water	Gas	85.7		VSPH-90
Thermo-Dynamics Boiler Company	SPK 600 Series	Water	Oil	85.7		1.10 GPH
Crown Boiler Co.	Tobago	Water	Oil	85.8	85.8-86.1	TW2-065, TW2-075, TW2-090, TW2-120
EFM	PK 440 Series	Water	Oil	85.8		0.85 GPH
New Yorker Boiler Co	CL Series	Water	Oil	85.8		CL4-126
NTI	Odyssey	Water	Oil	85.8		C105
NTI	Odyssey	Water	Oil	85.8		CT215
New Yorker Boiler Co	FR-173-W	Water	Oil	85.9		FR-173-W
Newmac		Water	Oil	85.9		NBR-94
Newmac		Water	Oil	85.9		NBR2-94
Peerless (P.B. Heat)	WV-DV	Water	Oil	85.9		WV-DV-03-WPC-.85gph
Peerless (P.B. Heat)	WV-DV	Water	Oil	85.9		WV-DV-03-WPCT-.85gph
Burnham Hydronics	MegaSteam	Steam	Oil	86		MST288, MST396, MST513, MST629
Buderus Hydronic Systems	Gas Boilers	Water	Oil	86	86.0-86.3	G215/3, /4, /5, /6 models
Buderus Hydronic Systems	Gas Boilers	Water	Oil	86	86.0-86.8	G115/21, /28, /34

Columbia Boiler Company	Casco Bay CBX	Water	Oil	86		CBX 110WC, CBX 110WC-DV
Energy Kinetics	System 2000	Water	Propane	86	86-88	EK-1, EK-1-DV, EK-2, EK-2-DV
Excel	JS	Water	Gas	86		All series beginning with JS
Hydrotherm Boilers	Sabre Series	Water	Gas	86	86.0-86.5	FX-70, FX-105, FX-140, FX-175, FX-200
LAARS Heating Systems Company	MAX	Water	Oil	86		MAX
New Yorker Boiler Co	CL Series	Water	Oil	86		CL3-091
New Yorker Boiler Co	FR-205-W	Water	Oil	86		FR-205-W
Peerless (P.B. Heat)	Peerless Series PSC II	Water	Gas	86		PSCII-03-WPC
Peerless (P.B. Heat)	WV-DV	Water	Oil	86		WV-DV-04 WPC 1.30gph
Slant/Fin Corporation	Intrepid	Water	Oil	86		TR-30H,40H,50H
Slant/Fin Corporation	Liberty	Water	Oil	86		LD-30H
Slant/Fin Corporation	Liberty	Water	Oil	86		LD-40H
Slant/Fin Corporation	Liberty	Water	Oil	86		LD-50H
Slant/Fin Corporation	XL-2000	Water	Oil	86		XL-30H
Slant/Fin Corporation	XL-2000	Water	Oil	86		XL-40H
Thermo-Dynamics Boiler Company	HT-II Series	Water	Oil	86		HT-165
Thermo-Dynamics Boiler Company	TDX Series	Water	Oil	86		TDX 110WC, TDX 110WC-DV
Utica Boilers	BC-Series	Water	Oil	86		BC-3D, BC-4D
Utica Boilers	Star Fire III Series	Water	Oil	86		SFH 365W, 4100W, 5125W, 6150W
Axeman-Anderson Co.	Axeman-Anderson Boilers			86	86.0-86.1	PO-2 Series: Model 74POD-2, 87POD-2 (Damper, Light Oil)
Smith Cast Iron Boilers	Lexington Series			86	86.0-86.5	GS110-3 through GS110-7
Crown Boiler Co.	Freeport	Water	Oil	86.1	86.1-87.6	CT-3, CT-4, CT-5, CT-6, CT-7
Peerless (P.B. Heat)	EC/ECT	Water	Oil	86.1		EC/ECT-04- 1.25 gph
Pure Pro	Trio	Water	Oil	86.1		P4, PSD
Slant/Fin Corporation	Victory	Water	Gas	86.1		VSPH-60
EFM	PK 450 Series	Water	Oil	86.2		0.85 GPH
Energy Kinetics	System 2000	Water	Oil	86.2	86.2-87.5	EK-1, EK-1-DV, EK-2, EK-2-DV
Newmac		Water	Oil	86.2		NBR-109V
Newmac		Water	Oil	86.2		NBR2-109V
NTI	Odyssey	Water	Oil	86.2		C125
Peerless (P.B. Heat)	EC/ECT	Water	Oil	86.2		EC/ECT-05- 1.75 gph
Peerless (P.B. Heat)	WBV	Water	Oil	86.2		WBV-03-.85gph
Slant/Fin Corporation	Intrepid (LDV)	Water	Oil	86.2		TRDV-30-1.10
Weil-McLain	Ultra Oil	Water	Oil	86.2		UO-4, 1.20GPH
Dexter Boilers	Boilers	Water	Oil	86.3		25
Newmac		Water	Oil	86.3		NBR-100

Newmac		Water	Oil	86.3		NBR-111V
Newmac		Water	Oil	86.3		NBR2-100
Newmac		Water	Oil	86.3		NBR2-111V
New Yorker Boiler Co	FR-98-W	Water	Oil	86.4		FR-98-W
Newmac		Water	Oil	86.4		NBR-96
Newmac		Water	Oil	86.4		NBR2-96
Peerless (P.B. Heat)	PRO Series	Water	Oil	86.4		PRO-04-080
Pensotti	Heatline	Water	Oil	86.4		DK2-4
Pure Pro	Trio	Water	Oil	86.4		P6
Weil-McLain	WGO	Water	Oil	86.4		WGO-2
Columbia Boiler Company	Casco Bay CBX	Water	Oil	86.5		CBX 100WC, CBX 100WC-DV
Columbia Boiler Company	Solaia Series	Water	Oil	86.5		SL4100
Peerless (P.B. Heat)	PRO Series	Water	Oil	86.5		PRO-05-100
Pensotti	BlueLine	Water	Oil	86.5		BL5-95
Pensotti	BlueLine	Water	Oil	86.5		BL6-120 HE
Pensotti	BlueLine	Water	Oil	86.5		BL7-140HE
Pensotti	Blueline	Water	Oil	86.5		BL3- 50 HE
Pensotti	Blueline	Water	Oil	86.5		BL4-75 HE
Pure Pro	Trio	Water	Oil	86.5		P5, P5D
Slant/Fin Corporation	Eutectic	Water	Oil	86.5		EC-25,26
Thermo-Dynamics Boiler Company	TDX Series	Water	Oil	86.5		TDX 100WC, TDX 100WC-DV
Toyotomi	Oil Miser	Water	Oil	86.5		OM-180
Weil-McLain	Ultra Oil	Water	Oil	86.5		UO-3, .80GPH
Weil-McLain	Ultra Oil	Water	Oil	86.5		UO-3, 1.0GPH
Weil-McLain	Ultra Oil	Water	Oil	86.5		UO-5, 1.40GPH
Dexter Boilers	Boilers	Water	Oil	86.6		20
Newmac		Water	Oil	86.6		NBR-90
Newmac		Water	Oil	86.6		NBR-98
Newmac		Water	Oil	86.6		NBR2-90
Newmac		Water	Oil	86.6		NBR2-98
Peerless (P.B. Heat)	EC/ECT	Water	Oil	86.6		EC/ECT-03- .75 gph
Buderus Hydronic Systems	Buderus	Water	Oil	86.7		G215/7
Burnham Hydronics	LE, LEDV Series	Water	Oil	86.7		LE-1, LEDV-1
De Dietrich	Residential Hot Water Boiler	Water	Oil	86.7		GT 210A
New Yorker Boiler Co	FR-147-W	Water	Oil	86.7		FR-147-W
New Yorker Boiler Company, Inc.	MicroTEK3	Water	Oil	86.7		MicroTEK3-1
New Yorker Boiler Company, Inc.	MicroTEK3DV	Water	Oil	86.7		MicroTEK3DV-1
Newmac		Water	Oil	86.7		NBR-91
Newmac		Water	Oil	86.7		NBR2-91
NTI	Odyssey	Water	Oil	86.7		VS80
Peerless (P.B. Heat)	WV-DV	Water	Oil	86.7		WV-DV-03 WPC-.75gph
Peerless (P.B. Heat)	WV-DV	Water	Oil	86.7		WV-DV-03 WPCT-.75gph
Peerless (P.B. Heat)	WV-DV	Water	Oil	86.7		WV-DV-04 WPC 1.15gph
Pensotti	Heatline	Water	Oil	86.7		DK2-6

Viessmann	Vitorond 200	Water	Oil	86.7	86.7 - 86.	VR2-18 through VR2-63
NTI	Odyssey	Water	Oil	86.8		C230
Ambassador	Axia 20E	Water	Gas	86.9		Axia 20E
Columbia Boiler Company	Solaia Series	Water	Oil	86.9		SL5125
Columbia Boiler Company	Solaia Series	Water	Oil	86.9		SL6150
NTI	Odyssey	Water	Oil	86.9		C85
Pensotti	Heatline	Water	Oil	86.9		DK2-7
Viessmann	Vitorond 100	Water	Oil	86.9		VR1-22 through VRI-63
Burnham Hydronics	MPO	Water	Oil	87		MPO84, MPO147, MPO189, MPO231
Burnham Hydronics	MPODV	Water	Oil	87		MPO84DV, MPO147DV, MPO189DV, MPO231DV
Burnham Hydronics	Revolution	Water	Gas	87	87-88	RV3, RV4, RV5, RV6, RV7
Columbia Boiler Company	Casco Bay CBX	Water	Oil	87		CBX 90WC, CBX 90WC-DV
De Dietrich	Residential Hot Water Boiler	Water	Oil	87		GT 120A
NTI	Odyssey	Water	Oil	87		C95
Peerless (P.B. Heat)	WBV	Water	Oil	87		WBV-04-.95 gph
Slant/Fin Corporation	Eutectic	Water	Oil	87		EC-13,14,15,16
Slant/Fin Corporation	Eutectic	Water	Oil	87		EC-13DV,14DV,15,DV,16DV
Thermo-Dynamics Boiler Company	TDX Series	Water	Oil	87		TDX 90WC, TDX 90WC-DV
Utica Boilers	USC-Series	Water	Gas	87		USC-3, 4, 5
Weil-McLain	GV	Water	Gas	87		GV-6
Pensotti	Heatline	Water	Oil	87.1		DK2-7
Viessmann	Vitola 200	Water	Oil	87.1	87.1 - 87.	VB2-18 through VB2-63
Newmac		Water	Oil	87.2		NBR-96V
Newmac		Water	Oil	87.2		NBR2-96V
Slant/Fin Corporation	Intrepid (LDV)	Water	Oil	87.2		TRDV-30-0.85
Weil-McLain	GV	Water	Gas	87.2		GV-5
Weil-McLain	GV	Water	Gas	87.3		GV-4
Dunkirk Boilers	EV Series	Water	Oil	87.4	87.4% - 87.6%	All models ending in UDES or DES
Dunkirk Boilers	EV Series	Water	Oil	87.4	87.4% - 87.6%	DFPO-3T, 4T, 5T, 6T, 8T
Newmac		Water	Oil	87.4		NBR-90V
Newmac		Water	Oil	87.4		NBR-98V
Newmac		Water	Oil	87.4		NBR2-90V
Newmac		Water	Oil	87.4		NBR2-98V
Ultimate	Ultimate Products	Water	Oil	87.4	87.4-87.6%	PFO-3,4,5,7,9 and PF03T, 4T, 5T, 6T, 8T
Peerless (P.B. Heat)	WBV	Water	Oil	87.5		WBV-03-.60 gph
Slant/Fin Corporation	Intrepid (LDV)	Water	Oil	87.5		TRDV-30-1.00

Weil-McLain	GV	Water	Gas	87.5		GV-3
NTI	Odyssey	Water	Oil	87.6		C220
New Yorker Boiler Co	FR-HGS	Water	Oil	87.8		FR-HGS
Ambassador	BMS 10/20	Water	Gas	88.2		BMS 10/20
LAARS Heating Systems Company	9600 CB	Water	Gas	88.6		CB-M2
Bryant Heating & Cooling Systems	Plus Series Boilers	Water	Gas	90		All BW9 models (50,75,100)
Carrier	WeatherMaker? Boilers	Water	Gas	90		All BW9 models (50,75,100)
Conematic Heating Systems Inc.	Boilers	Water	Natural Gas	90		CM-1
Conematic Heating Systems Inc.	Boilers	Water	Natural Gas	90		CM-RU
Conematic Heating Systems Inc.	Hydronic Boiler & Demand Water Heater	Water	Natural Gas	90		CM-1
Conematic Heating Systems Inc.	Hydronic Boiler Radiant Unit	Water	Natural Gas	90		CM-RU
Dunkirk Boilers	Quantum 90 Series	Water	Gas	90		Q-90-50, -75, 100
Dunkirk Boilers	Quantum 90-200	Water	Gas	90		Q90 -125, 150, 175, 200
Mestek	i Series	Water	Gas	90		200i
Quietside	QVM-9	Water	Gas	90		QVM9-090/125/150
Utica Boilers	UB90-100	Water	Gas	90		UB90-50, UB90-75, UB90-100
Utica Boilers	UB90-200	Water	Gas	90		UB90-125, 150, 175, 200
Hydrotherm Boilers	Pulse	Water	Gas	90.3	90.3-90.6	AM-100, AM-150, AM-300
LAARS Heating Systems Company	Summit	Water	Gas	90.5		SMB
NTI	Trinity	Water	Gas	90.8		T-150, T-200
NTI	Trinity	Water	Gas	90.8		T150C, T200C
Peerless (P.B. Heat)	Peerless Pinnacle Oil	Water	Oil	91.3		PO-84
Triangle Tube	Prestige	Water	Gas	91.4		Solo 250
Peerless (P.B. Heat)	Peerless Pinnacle Oil	Water	Oil	91.7		PO-70
Peerless (P.B. Heat)	Peerless Pinnacle Oil	Water	Oil	91.8		PO-84A
Triangle Tube	Prestige	Water	Gas	91.8		Solo 175
Heat Transfer Products, Inc.	Gas Fired Condensing Boiler	Water	Gas	92		Munchkin T50M
Heat Transfer Products, Inc.	Gas Fired Condensing Boiler	Water	Gas	92		Munchkin T80M
Monitor Products, Inc.	Fully Condensing Boilers	Water	Oil	92	92-97	FCX fully condensing boiler
Peerless (P.B. Heat)	Peerless Pinnacle Oil	Water	Oil	92		PO-70A
Weil-McLain	Ultra	Water	Gas	92		Ultra 105
Heat Transfer Products, Inc.	Gas Fired Condensing Boiler		Gas	92		Munchkin 140M
Heat Transfer Products, Inc.	Gas Fired Condensing Boiler			92		Munchkin 199M
Heat Transfer Products, Inc.	Gas Fired Condensing Boiler			92		Munchkin 80M
Triangle Tube	Prestige	Water	Gas	92.2		Solo 110

Baxi	Luna HT	Water	Gas	92.5	Luna HT 1.330
Baxi	Luna HT	Water	Gas	92.5	Luna HT 1.450
Baxi	Luna HT	Water	Gas	92.5	Luna HT 1.650
Baxi	Luna HT	Water	Gas	92.5	Luna HT 330
LAARS Heating Systems Company	Mascot	Water	Gas	92.5	HT
Hydrotherm	KN	Water	Gas	92.7	KN-2
Hydrotherm Boilers	GX Series	Water	Gas	92.7	GX-150
Hydrotherm Boilers	GX Series	Water	Gas	92.7	GX-200
NTI	Matrix	Water	Gas	92.7	M100
NTI	Trinity	Water	Gas	92.7	Ti 100
NTI	Trinity	Water	Gas	92.7	Ti150
NTI	Trinity	Water	Gas	92.7	Ti150c
NTI	Trinity	Water	Gas	92.7	Ti200
NTI	Trinity	Water	Gas	92.7	Ti200c
Smith Cast Iron Boilers	GT Series	Water	Gas	92.7	GT-150, GT-200
Weil-McLain	Ultra	Water	Gas	92.8	Ultra 230
Heat Transfer Products, Inc.	Munchkin	Water	Gas	93	Munchkin Contender MC 120
Heat Transfer Products, Inc.	Munchkin	Water	Gas	93	Munchkin Contender MC 50
Heat Transfer Products, Inc.	Munchkin	Water	Gas	93	Munchkin Contender MC 80
Heat Transfer Products, Inc.	Munchkin	Water	Gas	93	Munchkin Contender MC 99
Lochinvar	Knight	Water	Gas	93	KB(N.L)080-285
Lochinvar	Knight	Water	Gas	93	KBL080
Lochinvar	Knight	Water	Gas	93	KBL105
Lochinvar	Knight	Water	Gas	93	KBL150
Lochinvar	Knight	Water	Gas	93	KBL210
Lochinvar	Knight	Water	Gas	93	KBL285
Lochinvar	Knight	Water	Gas	93	KBL399
Lochinvar	Knight	Water	Gas	93	KBL500
Lochinvar	Knight	Water	Gas	93	KBN105
Lochinvar	Knight	Water	Gas	93	KBN150
Lochinvar	Knight	Water	Gas	93	KBN210
Lochinvar	Knight	Water	Gas	93	KBN285
Lochinvar	Knight	Water	Gas	93	KBN399
Lochinvar	Knight	Water	Gas	93	KBN500
Lochinvar	Knight Wall Mount	Water	Gas	93	WBL050
Lochinvar	Knight Wall Mount	Water	Gas	93	WBL080
Lochinvar	Knight Wall Mount	Water	Gas	93	WBL105
Lochinvar	Knight Wall Mount	Water	Gas	93	WBL210
Lochinvar	Knight Wall Mount	Water	Gas	93	WBN050
Lochinvar	Knight Wall Mount	Water	Gas	93	WBN080
Lochinvar	Knight Wall Mount	Water	Gas	93	WBN105
Lochinvar	Knight Wall Mount	Water	Gas	93	WBN150
Lochinvar	Knight Wall Mount	Water	Gas	93	WBN210
Slant/Fin Corporation	Bobcat	Water	Gas	93	B-120
Weil-McLain	Ultra	Water	Gas	93	Ultra 155
Weil-McLain	Ultra	Water	Gas	93	Ultra 80

Burnham Hydronics	CHG	Water	Nat/LP Gas	93.1		CHG150
Crown Boiler Co.	Bimini	Water	Gas	93.1	93.1-94.2	BWC150, BWC225
Weil-McLain	Ultra	Water	Gas	93.3		Ultra 310
Hamilton Engineering	EVO micro	Water	Gas	93.7		All models beginning with HWD - 129, 179, 199ASME, 299ASME
Hamilton Engineering	EVO micro	Water	Gas	93.7		All models beginning with HWH - 129, 129.8, 179, 179.8, 199, 199ASME, 299, 299ASME
Slant/Fin Corporation	Lynx	Water	Gas	94		LX-85
Buderus Hydronic Systems	GB142	Water	Gas	94.1		GB142/30
Burnham Hydronics	CHG	Water	Nat/LP Gas	94.2		CHG225
Viessmann	Vitodens 200	Water	Gas	94.2		WB26-24 through WB215-60
Burnham Hydronics	FCM	Water	Gas	94.5	94.5-95.4	FCM070, FCM090, FCM120
Climate Energy	CE95M	Water	Gas	95		All models beginning with CE95M
Dunkirk Boilers	Quantum Leap (QL) Series	Water	Gas	95		QL-100
Dunkirk Boilers	Quantum	Water	Gas	95		Q95M 200
Monitor Products, Inc.	MZ-Wall Hung Condensing Boiler	Water	Gas	95		MZ 40C, MZ 25S, MZ 25C
Utica Boilers	UB	Water	Gas	95		UB95M 200
Peerless (P.B. Heat)	Pinnacle	Water	Gas	95.1		PI-80, PI-140, PI-199
Peerless (P.B. Heat)	Pinnacle	Water	Gas	95.1		PI-T50, PI-T80
Viessmann	Vitodens 100	Water	Gas	95.1		WB1 8-24 through WB1 8-30
Viessmann	Vitodens 200	Water	Gas	95.2		WB2 6-24 through WB2 15-60
Buderus Hydronic Systems	GB142	Water	Gas	95.4		GB142/24
Buderus Hydronic Systems	GB142	Water	Gas	95.4		GB142/45
Buderus Hydronic Systems	GB142	Water	Gas	95.5		GB142/60

Information Source (2 of 3): California Energy Commission database file

How to Access

Downloadable via an on-line bulletin board service by dialing (916) 654-4069.

A “Read Me” file describes all of the information available and gives instructions for downloading and use of the database files, including file decompression procedures. The fields in each database are described in a separate text file. Three-letter codes for Manufacturer names and Brand names, for all product types together, are listed in alphabetical order in two separate text files containing approximately 1,500 names and codes.

To make a special request for a printed list, contact:
Appliance Certification Program
California Energy Commission
(916) 654-5106
(916) 654-4304 (fax) Email: efftech@energy.ca.gov

Scope

File includes both residential and non-residential-type models, and contains data on over 2,000 residential-type models from more than 25 manufacturers (available in DBF, comma-delimited, or ASCII format).

Includes steam and hot water boilers for space heating, and boilers that can be used for either space heating or to heat domestic hot water.

Includes boilers ranging in input from 30,000 – 85,000,000 Btuh.

Includes natural gas, liquefied petroleum gas, electric, and combination-fired boilers. (Oil-fired boilers are not required to be certified to the Commission but data may be submitted voluntarily by manufacturers.)

Original Data Source: Provided directly to the Energy Commission by manufacturers.

Update Frequency: Monthly

Information Source (3 of 3): American Council for an Energy-Efficient Economy's (ACEEE) Listings of the Most Efficient Appliances.

How to Access

Listings are also printed in ACEEE's Consumer Guide to Home Energy Savings, 6th ed, 1998, available in bookstores or directly from ACEEE; orders may be placed by phone, fax, or email.

Contact:

Publications Manager American Council for an Energy-Efficient Economy

(202) 429-0063

(202) 429-0193 (fax)

Email: ace3pubs@ix.netcom.com

Cost:

1–25 copies: \$8.95 each

26–99 copies: \$6.36 each

100–499 copies: \$4.77 each

500–999 copies: \$3.98 each

Scope

Two lists cover both types of gas boilers:

88 hot water models from 10 manufacturers with Annual Fuel Utilization Efficiencies (AFUE) > 83.0 %; Capacities from 43,000 – 139,000 Btuh.

41 steam models from among 10 brands with Thermal Efficiencies >= 81.0 %; Capacities from 81,000 – 173,000 Btuh.

Two lists cover both types of oil boilers:

94 hot water models from among 20 brands with AFUEs >= 86.0 %; Capacities from 62,000 – 147,000 Btuh.

31 steam models from among 11 manufacturers with AFUEs \geq 86.0 %; Capacities from 78,000 – 151,000 Btuh.

Models are grouped by size (capacity), and listed in order of descending AFUE.

Original Data Source: Derived from *Consumer's Directory of Certified Efficiency Ratings for Residential Heating and Water Heating Equipment*, Gas Appliance Manufacturer's Association, Arlington, VA, October 1997 – April 1998 edition.

Update Frequency: Annually