PENNCO SILVER

CAST IRON BOILERS

Pennco SILVER makes Simple Comfort, Affordable.

PENNCO SILVER
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Affordable Hydronic Heating

Pennco SILVER

While today's tough economy makes it harder than ever to meet basic needs – simple comfort shouldn't be a sacrifice. That's why Pennco now offers SILVER – a full line of affordable heating products. American made Pennco SILVER is designed, tested and assembled to ensure customers get the very best in home heating comfort and value.

Added peace-of-mind is available in the form of five and ten year Comfort Plus Extended Parts & Labor Warranties.

Efficiency

Pennco SILVER features economical, mostly mid-efficiency heating solutions. Pennco understands that no one really plans to replace their heating system and not everyone can afford to upgrade to high efficiency. If your home heating appliance is more than 15 years old, even a mid-efficiency upgrade could save you money on your utility bills.

Selection

Pennco SILVER features a wide range of heating equipment suitable for residential and light commercial applications.

15B Series

FSB Series

KSW Series

16 Series

KSC Series

41J Series

Hotline

Boiler Selection Guide

Model	Application	Fuel	Efficiency	Capacity	Combustion	Venting
15B	Residential Hot Water Boiler	Gas	Mid-Efficiency	45 - 70 - 96 - 120 - 145 - 175 - 195 - 245 - 295 MBH	Atmospheric	Chimney
FSB	Residential Hot Water Boiler	Gas	Mid-Efficiency	42.5 - 75 - 112.5 - 150 - 187.5 - 225 MBH	Fan Assist	Chimney or Side-Wall
KSW	Residential Hot Water Boiler	Oil	Mid-Efficiency	84 - 105 - 140 - 126 - 175 - 210 - 168 - 245 - 280 MBH	Atmospheric	Chimney
16	Residential Steam Boiler	Gas	Mid-Efficiency	75 - 112 - 150 - 187 - 225 - 262 - 299 MBH	Atmospheric	Chimney
KSC	Residential Steam Boiler	Oil	Energy Star	91 - 140 - 175 - 210 - 245 - 280 - 315 - 385 MBH	Atmospheric	Chimney
41J	Light Commercial Hot Water or Steam Boiler	Gas	Mid-Efficiency	300 - 3,000 MBH	Atmospheric	Chimney
Hotline	Residential/Light Commercial Indirect Hot Water Heater	N/A	*	30 - 40 - 50 - 80 - 119 Gal.	N/A	N/A

* Efficiency varies based on boiler efficiency and other factors.

15B Series

Gas-Fired Hot Water Boiler

The Pennco 15B Series Boiler has been designed with features making it the ideal home heating solution. With quality features such as an advanced heat exchanger design, greater BTU input per sectional size and optional electronic ignition, the 15B Series can achieve fuel efficiencies up to 82% AFUE.

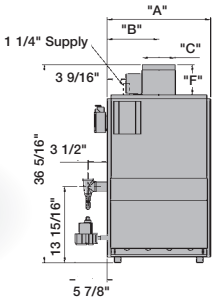
System Features

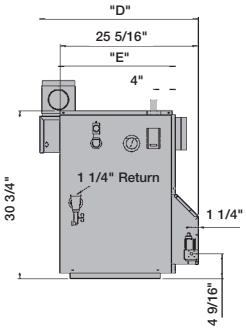
Quality Heat Exchanger Design – The 15B Series features a robust cast iron heat exchanger with greater weight per section resulting in higher efficiencies and longer boiler life. The sections are connected with cast iron push nipples, which expand and contract at the same rate as the sections ensuring a water tight seal. Additional sizes are available and when utilized in a seven section configuration, the 15B Series can reach nearly 300 MBH input.

High Efficiency – The 15B Series provides annual fuel utilization efficiency up to 82% as certified by the US Department of Energy testing standards.

Hi-Limit Control – The Honeywell hi-limit control has been separated from the circulator relay for ease of serviceability and to reduce potential service parts costs.

Easy Installation and Maintenance – A compact design, low profile draft hood and top supply piping connections allow for easier installation. The pilot is mounted to the front of the burner base.





Standard Equipment:

- Boiler Jacket
- Cast-Iron Boiler Battery
- High Limit Control
- Vent Damper Relay
- Combination Pressure Temperature Gauge
- Circulator
- Stainless Steel Burners
- Automatic Vent Damper
- Combination 24-Volt Gas Control *includes:* Automatic Gas Valve, Gas Pressure Regulator, Automatic Pilot, Safety Shut Off, Pilot Flow Adjustment, Pilot Filter
- A.S.M.E. Relief Valve
- Drain Valve

Optional Equipment:

- Intermittent Electric Ignition Pilot System
- Combustible Floor Kit
- Taco Circulator Pump. Note: Propane option available.

Specifications:

MEA# 39-86E Vol VIII

Boiler Number	A.G.A. Input Btu/Hr.*	Heating Capacity Btu/Hr.*	I=B=R Net Output Btu/Hr.*†	Natural§ Gas Inlet	Dimensions (Inches)						Pump Size Supply & Return Tappings	Number of Burners	AFUE Elec. Ign. & Damper	AFUE Std. Pilot & Damper
					A	B	C	D	E	F				
15045	45,000	37,000	32,000	1/2"	11.3	5.6	4.0	27.1	20.5	5.0	1¼"	1	82.0%	80.0%
15070	70,000	57,000	50,000	1/2"	15.1	7.6	5.0	28.1	21.0	5.0	1¼"	2	82.0%	80.0%
15096	96,000	79,000	69,000	1/2"	15.1	7.6	5.0	28.1	21.0	5.0	1¼"	2	82.0%	80.0%
15120	120,000	98,000	85,000	1/2"	19.0	9.5	6.0	29.1	21.5	5.5	1¼"	3	82.0%	80.0%
15145	145,000	119,000	103,000	1/2"	19.0	9.5	6.0	29.1	21.5	5.5	1¼"	3	82.0%	80.0%
15175	175,000	141,000	123,000	1/2"	22.9	11.4	7.0	30.1	22.0	6.0	1¼"	4	80.5%	80.0%
15195	195,000	157,000	137,000	1/2"	22.9	11.4	7.0	30.1	22.0	6.0	1¼"	4	80.5%	80.0%
15245	245,000	197,000	171,000	3/4"	26.8	13.4	8.0	31.1	22.5	7.0	1¼"	5	80.5%	80.0%
15295	295,000	237,000	206,000	3/4"	30.6	15.3	9.0	32.1	23.0	9.0	1¼"	6	80.5%	80.0%

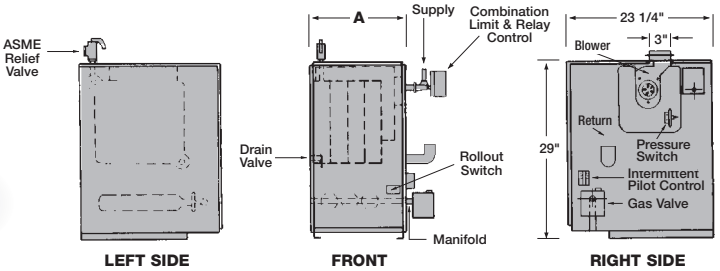
* For elevations above 2000 feet, ratings should be reduced at a rate of 4% for each 1000 feet above sea level.
† For equivalent square feet of radiation, divide I=B=R output by 150.
§ Propane gas Inlet, all units, 1/2"

C.S.A. Certified
For Natural Gas Or Propane

Tested For 100 LBS.
ASME Working Pressure

FSB Series

Gas-Fired Hot Water Boiler
Side-Wall or Chimney Vent



Standard Equipment:

- Assembled boiler with insulated jacket
- 3" x 4" galvanized increaser fitting and silicone sealant to adapt 3" fan outlet to 4" vent pipe for chimney venting
- Combination high limit control and circulator relay
- 24 volt transformer to power gas control system
- Flame rollout safety shut-off fuse link (rollout switch)
- Pressure switch for proving air flow
- Combination pressure/temperature gauge (packed separately)
- 1 1/4" circulator
- 3/4" boiler drain valve
- 30 lb. ASME relief valve
- Completely installed and wired gas control system with burners and manifold, ***consisting of:***
  - Stainless steel burners
  - Automatic redundant combination gas valve, 24 volt, with pilot filter
  - Pressure regulator
  - Intermittent Pilot Control, continuous re-try, 100% shut-off for natural & propane gas
  - Combination pilot/burner/electrode/flame sensor
  - Complete installation instructions

Optional Equipment:

- Combustible floor plate – 24" x 30" for 2-5 section; 30" x 30" for 6 & 7 section
- Tjernlund VH-1-3" side wall vent hood
- Tjernlund VH-1-4" side wall vent hood
- Propane gas to natural gas conversion kits
- Natural gas to propane gas conversion kits

Specifications:

MEA# 484-84-E Vol. III

Boiler Model Number	Number of Sections	AGA Input (MBH)††	DOE Heating Capacity (MBH)†	I=B=R Net Rating (MBH)††	Width A	Annual Fuel Efficiency (AFUE)
FSB-2	2	42.5	36	31	11"	84.4
FSB-3	3	75	63	55	14 1/4"	83.4
FSB-4	4	112.5	94	82	17 1/2"	83.0
FSB-5	5	150	125	109	20 3/4"	82.7
FSB-6	6	187.5	155	135	24"	82.3
FSB-7	7	225	186	162	27 1/4"	82.0

†† MBH = 1,000 Btuh
Btuh = British Thermal Unit Per Hour

† AFUE and Heating Capacity are based upon D.O.E (Department of Energy) test procedure.

* Conventional venting through a lined chimney use 4" Flue Adapter provided.

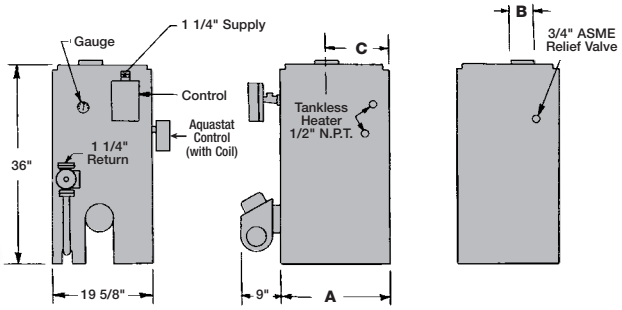
* Through the wall venting – Sizes 2-3-4-5 use 3" Stainless Steel Vent Pipe. Sizes 6-7 use 4" Stainless Steel Vent Pipe (not included)

C.S.A. Certified For Natural Gas Or Propane

Tested for 50 lbs. ASME Working Pressure

KSW Series

Oil-Fired Hot Water Boiler



Standard Equipment:

- Assembled boiler with insulated jacket
- Combination high limit control and circulator relay, on boilers without optional tankless heater coil
- Combination high limit control, low limit control and circulator relay, on boilers with optional tankless heater coil
- Target wall (vacuum formed refractory ceramic fiber)
- Combination pressure/temperature gauge
- Barometric draft control 6"
- 1 1/4" circulator
- 3/4" boiler drain valve
- 30 lb. ASME relief valve
- Beckett AFG series oil burner equipped with nozzle, primary control, interrupted duty ignition, PSC motor and clean cut (solenoid) pump

Specifications:

Model No. with Tankless Coil	Model No. without Tankless Coil	Number of Sections	Input *MBH	**Heating Capacity *MBH	NET I=B=R Rating *MBH	Firing Rate †GPH	Tankless Heater Capacity ††GPM	Chimney Size	DIMENSIONS (Inches) A	B	C	A.F.U.E. †††	Approx. Shipping Weight
★ 3K.60C	★ 3K.60	3	84	74	64	.60	2.85	8" x 8" x 15'	17 3/4	6	9 3/4	86.1	500
★ 3K.75C	★ 3K.75	3	105	92	80	.75	3.00	8" x 8" x 15'	17 3/4	6	9 3/4	85.6	500
3K1.00C	3K1.00	3	140	120	104	1.00	3.25	8" x 8" x 15'	17 3/4	6	9 3/4	84.4	500
★ 4K.90C	★ 4K.90	4	126	111	97	.90	3.15	8" x 8" x 15'	21	6	11 3/8	86.4	580
★ 4K1.25C	★ 4K1.25	4	175	153	133	1.25	3.50	8" x 8" x 15'	21	6	11 3/8	85.9	580
★ 4K1.50C	★ 4K1.50	4	210	181	157	1.50	3.75	8" x 8" x 15'	21	6	11 3/8	85.1	580
★ 5K1.20C	★ 5K1.20	5	168	147	128	1.20	3.45	8" x 8" x 15'	24 1/4	6	13	86.1	680
5K1.75C	5K1.75	5	245	210	183	1.75	4.00	8" x 8" x 15'	24 1/4	6	13	84.8	680
5K2.00C	5K2.00	5	280	239	209	2.00	4.25	8" x 8" x 20'	24 1/4	6	13	84.0	680

* MBH = 1,000 Btu per hour Btu = British Thermal Unit

** Heating capacity based on 13% CO_2 with a 0.02" W.C. draft overfire, and a #1 smoke or less. Testing was done in accordance with the D.O.E. (Department of Energy) test procedure.

† GPH = Gallons per hour oil at 140,000 Btu per gallon

†† Gallons of water per minute, heated from 40° to 140°, with 200° boiler water temperature, intermittent draw.

††† A.F.U.E. = Annual Fuel Utilization Efficiency based on D.O.E. test procedure.

★ As an Energy Star Partner, Pennco has determined that this product meets Energy Star guidelines for energy efficiency.

Tested for 50 lbs. ASME Working Pressure

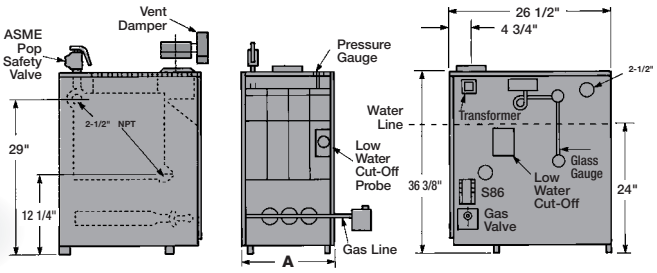
16 Series
Gas-Fired Steam Boiler

Standard Equipment:
- Assembled boiler with insulated jacket
- Two 2 1/2" supply tappings and two 2 1/2" return tappings
- Integral draft diverter – built into jacket
- 24 volt, 40VA transformer
- Pressure limit control
- Electronic probe type low water cut off
- Flame rollout safety shut-off fuse link and blocked vent safety shut-off switch
- Glass water level gauge
- Steam pressure gauge
- 3/4" boiler drain valve
- 15 lb. ASME pop safety valve
- Two 2 1/2" square head pipe plugs – to plug unused supply and return tappings
- Vent damper
- Completely installed and wired gas control systems with burners and manifold, ***consisting of:***
  - Automatic redundant combination gas valve, 24 volt, with pilot filter

  Electronic Ignition Only:
  - Intermittent Pilot Control, continuous re-try, 100% shut-off
  - Combination pilot/burner/electrode/flame sensor

  Standing Pilot Only:
  - Pilot burner and thermocouple

Optional Equipment:
- Combustible floor plate – 14614031 for 3-6 section; 14614032 for 7-9 section
- Electronic water feeder
- Float type low water cut-off in place of probe type
- Natural to propane conversion kit (when ordering kit, please provide serial number of boiler to be converted)



Specifications:

MEA# 77-91-E

BOILER UNIT NUMBER		Number of Sections	† NATURAL GAS				† PROPANE GAS				DIMENSIONS (in.)		A.F.U.E.	
Cont. Pilot with Damper	E/I Pilot with Damper		AGA Input ††MBH	Heating Capacity ††MBH	NET I=B=R ††MBH	NET I=B=R Sq.Ft. EDR	AGA Input ††MBH	Heating Capacity ††MBH	NET I=B=R ††MBH	NET I=B=R Sq.Ft. EDR	Flue Diameter	"A" Width	HSD with Damper	HSID with Damper
1603HSD	1603HSID	3	75	62	47	196	70	58	44	183	5	11 1/4	81.1	82.7
1604HSD	1604HSID	4	112	91	68	283	105	85	64	267	6	14 1/2	78.8	82.0
1605HSD	1605HSID	5	150	122	92	383	140	114	86	358	6	17 3/4	79.2	82.0
1606HSD	1606HSID	6	187	153	115	479	175	143	107	446	7	21	79.6	82.0
1607HSD	1607HSID	7	225	183	137	571	210	171	128	533	7	21 1/4	80.1	82.0
1608HSD	1608HSID	8	262	214	161	671	245	200	150	625	7	27 1/2	80.5	82.0
1609HSD	1609HSID	9	299	245	184	767	280	229	172	717	7	30 3/4	80.9	82.0

† For altitudes above 2,000 feet, ratings should be reduced at a rate or 4% for each 1,000 feet above sea level.

†† MBH = 1,000 Btu per hour
Btuh = British Thermal Unit per hour

Heating capacity based on D.O.E. (Department of Energy) standards

* Add 5-1/2" to height for vent damper

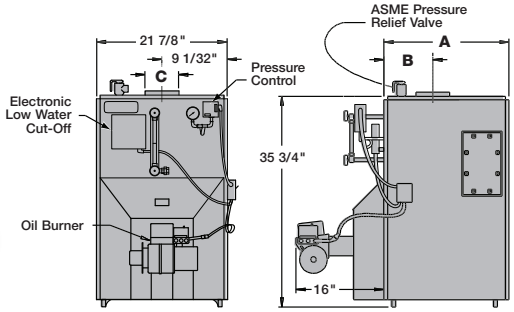
EDR = Equivalent Direct Radiation

Tested for 50 lbs. ASME Working Pressure

KSC Series
Oil-Fired Steam Boiler

Standard Equipment:
- Crated Cast-Iron Boiler
- Flush Jacket
- Swing-Out Burner Door
- Clean Cut Beckett Burner
- Target Wall/Liner
- ASME Relief Valve
- Water Level Gauge
- Steam Pressure Gauge
- Steam Pressure Control
- Electronic Low Water Cut-Off
- Drain Valve
- Wiring Harness
- Burner Electric Disconnect
- Plastic Cover
- Supply Tappings (Qty. 2 - 2")
- Return Tapping – 1 1/2"
- Skim Port

Tankless Water Heater Option:
- Tankless Hot Water Coil
- Limit Control



Specifications:

MEA# 182-86E

Boiler Model Number[1]	I = B = R Oil Burner Input[2]		D.O.E. Heating Capacity MBH[4]	I = B = R Net Ratings[3,4]		Pump Pressure PSI	Nozzle Furnished 140 PSIG[5]	A.F.U.E. Rating	DIMENSIONS			Tankless Water Heater Capacities Intermittent Draw G.P.M. (Model L-24)	Boiler Water Content Gals.
	G.P.H.	MBH[4]		Steam MBH	Sq. Ft. Steam				A Length of Flush Jacket	B Front of Jkt. to C/L of Flue Out	C Diameter of Flue Outlet		
*KSC0365	0.65	91	79	59	246	140	.60 80°B	85.00	16⅜	6½	6	**	11
KSC3100	1.00	140	116	87	363	140	.85 80°B	81.50	16⅜	6½	6	4.5	11
*KSC4100	1.00	140	120	91	377	140	.85 80°B	85.00	20¼	8½	7	4.5	13
KSC4125	1.25	175	145	109	454	140	1.10 60°B	82.50	20¼	8½	7	4.5	13
KSC4150	1.50	210	170	128	533	140	1.25 80°B	81.00	20¼	8½	7	4.5	13
KSC5175	1.75	245	202	152	633	140	1.50 80°B H	83.00	23⅜	10¼	8	5.0	15
KSC5200	2.00	280	227	170	708	140	1.75 70°B H	82.00	23⅜	10¼	8	5.0	15
KSC6225	2.25	315	251	188	783	140	2.00 45°B	—	27½	8⅝	8	5.0	17
KSC7275	2.75	385	307	230	958	140	2.25 60°B	—	31⅛	8⅝	8	5.0	19

* Indicates an Energy Star efficient Product

** Available on request.

Explanation Notes:
1. Add suffix "T" to denote boiler with tankless heater.
2. I=B=R burner capacity is based on an oil heating value of 140,000 Btu/gal. and with 13% CO_2.
3. Net ratings based on 170°F temperature in radiators and include 33% allowance for normal piping and pick-up load. Consult manufacturer for unusual piping and pick-up requirements.
4. For altitudes above 2,000 ft., ratings may be reduced at the rate of 4% for every 1,000 ft. above sea level.
5. Nozzle sizes with an H designation are Hago brand, all others are Delevan.
6. The electrical service is 120 Volts, 15 Amps, 60 Hz.

Tested For 15 LBS. ASME Working Pressure

41J Series

Gas-Fired Hot Water or Steam Modular Boiler

80% Thermal Efficiency

Electronic Ignition Base Standard Equipment:

- Base
- Fire Door
- Burner Orifice
- Manifold
- Main and Pilot Burner
- Electronic Pilot Gas Valve
- Intermittent Pilot Module
- High Gas Pressure Switch

Water Trim Package:

- Limit Control (two required on units 2,500,000 BTU and larger)
- Pressure Temperature Gauge
- Relief Valve
- Drain Valve
- Complete Jacket Assembly

Steam Trim Package:

- Low Water Cut-Off
- Glass Gauge Set
- Pop Safety Valve
- Steam Gauge
- Pressure Limit
- Drain Valve
- Complete Jacket Assembly

41J Series Boiler Bases are preassembled at the factory with burner manifold, burner orifices, gas valves, electronic ignition and pilot installed, ready for field installation of the pre-tested sections and appropriate packages.

Plug 'N Play Harness and Junction Box

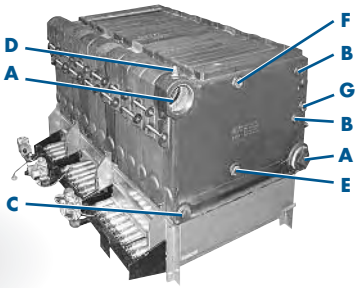
Individual base and junction box controls are designed for easy installation with Plug 'n Play harnesses. The entire boiler links together in a "snap". A color-coded factory supplied harness eliminates wiring errors.

Modular Efficiency

Most commercial boilers are either "all-on" or "all-off". The 41J boiler when used in conjunction with the optional Argo AMB Control Kit will stage fire the individual bases. Depending on model, capacities as low as 11% of full load can be obtained for optimal performance. The optional AMB Control Kit adjusts the water temperature for increased fuel economy. The control balances section run time for increased reliability. The modular base design allows for built in back-up to reduce "no heat" situations.

CSD1 Option

41J boilers are available with a CSD1 option to comply with CSD1 standards where required by public building code. The CSD1 option provides the increased number of controls and safety devices required to meet CSD1 standards.



* *If opening* **F** *is to be used for something other than the Pop Safety Valve or Pressure Relief Valve, or the Safety/Relief Valve is larger than 1", the Safety/Relief Valve must be installed in the Header Piping as near to the boiler as possible.*

41J Series Right-End and Left-End Tappings Data

OPENING	SIZE	STEAM	WATER
A	4"	Supply and Return	Supply and Return
B	1/2"	Primary LWCO and Gauge Glass Set	Plugged
C	1 1/2"	Drain, Right End	Drain, Left End
C	3/4"	Drain, Right End	Drain, Right End
D	1/2"	Plugged	Limit Control
E	1"	Accessories	Accessories
* F	1"	Pop Safety Valve	Pressure Relief Valve
G	3/4"	Plugged or Electronic (Probe Type) LWCO	Plugged

Specifications:

Boiler Model	A.G.A. Input (1)	A.G.A. Output (1)	Net I=B=R Ratings			Base Size & Flue Outlet			Chimney Size (6)	Flue Collector Size To Chimney	Horsepower Gross Output (4)	Pressure Drop Thru Water Boiler (5)	
	Btu Mbh	Btu Mbh	Steam Sq. Ft. (3)	Steam Btu Mbh	Water Btu Mbh	300 8 in.	400 10 in.	500 12 in.	I.D. x Ht.			GPM	In. Water
300	300	240	750	180	209	1			8" x 20'	8	7.16	18.9 37.8	0.10 0.50
400	400	320	1000	240	278		1		10" x 20'	10	9.55	25.2 50.4	0.27 0.86
500	500	400	1250	300	348			1	12" x 20'	12	11.94	31.5 63.0	0.40 1.20
600	600	480	1500	360	417	2			12" x 20'	12	14.33	37.8 75.6	0.50 1.70
700	700	560	1750	420	487	1	1		12" x 20'	12	16.72	44.1 88.2	0.70 2.50
800	800	640	2000	480	557		2		14" x 20'	14	19.10	50.4 100.8	0.88 2.90
900	900	720	2250	540	626		1	1	14" x 20'	14	21.49	56.7 113.4	1.10 3.80
1000	1000	800	2500	600	696			2	14" x 20'	14	23.88	63.0 126.0	1.30 4.00
1100	1100	880	2750	660	765	1	2		16" x 20'	16	26.27	69.3 138.6	1.50 5.00
1200	1200	960	3000	720	835		3		16" x 20'	16	28.66	75.6 151.2	1.80 6.00
1300	1300	1040	3250	780	904	1		2	16" x 20'	16	31.04	81.9 163.8	2.00 5.60
1400	1400	1120	3500	840	974		1	2	18" x 20'	18	33.43	88.2 176.4	2.40 7.00
1500	1500	1200	3750	900	1043			3	18" x 20'	18	35.82	94.5 189.0	2.60 8.30
1600	1600	1280	4008	962	1113		4		18" x 20'	18	83.21	100.8 201.0	2.80 9.60
1700	1700	1360	4283	1028	1183	1	1	2	18" x 20'	18	40.60	107.1 214.2	3.15 10.30
1800	1800	1440	4563	1095	1252		2	2	20" x 20'	20	42.99	113.4 226.8	3.50 11.00
1900	1900	1520	4838	1161	1322		1	3	20" x 20'	20	45.37	119.7 239.4	4.00 12.50
2000	2000	1600	5117	1228	1391			4	20" x 20'	20	47.76	126.0 252.0	4.50 14.00
2100	2100	1680	5392	1294	1461	2		3	20" x 20'	20	50.15	132.3 264.6	4.95 16.00
2200	2200	1760	5671	1361	1530		3	2	22" x 20'	22	52.54	138.6 277.2	5.40 18.00
2300	2300	1840	5913	1426	1600		2	3	22" x 20'	22	54.93	144.9 289.8	5.70 17.00
2400	2400	1920	6213	1491	1670		1	4	22" x 20'	22	57.31	151.2 302.4	8.00 19.00
2500	2500	2000	6471	1553	1739			5	22" x 20'	22	59.70	157.5 315.0	8.00 20.50
2600	2600	2080	6729	1615	1809	2		4	22" x 20'	22	62.09	163.8 327.6	7.00 24.00
2700	2700	2160	6988	1677	1878	1	1	4	24" x 20'	24	64.48	170.1 340.2	7.50 24.00
2800	2800	2240	7246	1739	1948		2	4	24" x 20'	24	66.87	176.4 352.8	8.00 26.00
2900	2900	2320	7504	1801	2017		1	5	24" x 20'	24	69.25	182.75 365.5	8.50 27.50
3000	3000	2400	7763	1863	2087			6	24" x 20'	24	71.64	189.1 378.2	9.00 29.00

Explanation Notes:

1. Ratings are at sea level to 2,000 feet. For altitudes above 2,000 feet, reduce all ratings 4% for each 1,000 feet above sea level.
2. Ratings in square feet are computed at 240 Btuh/square foot for steam boilers.
3. Ratings based on 33,500 Btuh per horsepower.
4. Pressure drop based on given flow from a single outlet and returning to a single inlet at the opposite end of the boiler.
5. Chimney sizes shown are one option based on a typical venting system, and sized according to the National Fuel Gas Code, assuming Type B double wall vent and vent connectors, other venting system designs are acceptable as shown on Flue Connection And Venting section of the installation manual. For further chimney design and sizing information, consult the National Fuel Gas Code, ANSI Z223.1/NFPA 54-latest revision, or ASHRAE-1996 HVAC Systems and Equipment Handbook, Chapter 30, Chimney, Gas Vent, and Fireplace Systems, or the Standard for Chimneys, Fireplaces, Vents, and Solid Fuel Burning Appliances. NFPA 211 – latest revision. Follow standard engineering practice.

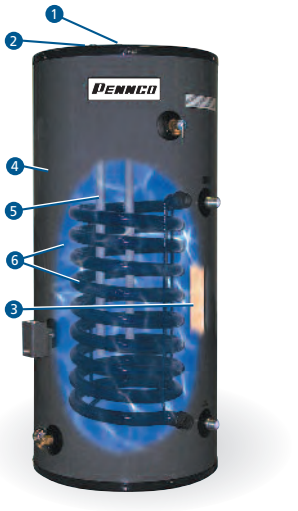
Tested for 100 lbs. ASME Working Pressure

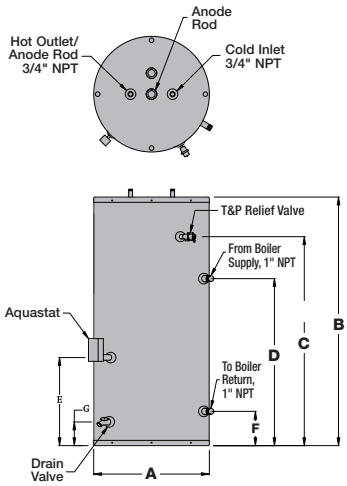
Pennco

Indirect Hot Water Heater

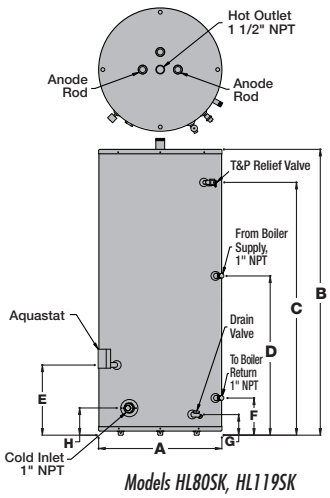
Commercial Quality and Capability. Residential Affordability.

1. Domestic Water Hot and Cold Side Connection – HL 30SK, HL 40SK, HL 50SK.
   Hot Only Top Connection – HL 80SK, HL119SK.
   Cold Only Bottom/Side – HL 80SK, HL119SK.
2. Coil Connections Include dielectric unions for both inlet and outlet
3. 2" Foam Insulation
4. Heavy-Duty Steel Jacket
5. Replaceable Extra-Thick Magnesium Anode Rod
6. Corrosion Resistant Porcelain-coated Enamel Smooth Coil and Interior Tank Walls
- Immersion Aquastats standard on all models
- Surface-mounted Thermostat
- Self-cleaning Drain Valve
- Factory Installed T&P Valve





Models HL30SK, HL40SK, HL50SK



Models HL80SK, HL119SK

Specifications:

Model Number	Storage Capacity	DIMENSIONS (inches) A	B	C	D	E	F	G	H	Shipping Weight
HL30SK	30 Gal.	22"	35¾"	27¾"	19½"	11¾"	6½"	4½"	N/A	180 lbs.
HL40SK	38 Gal.	22"	42¾"	34¾"	31½"	16¾"	6½"	4½"	N/A	226 lbs.
HL50SK	45 Gal.	22"	48¾"	39¾"	31½"	16¾"	6½"	4½"	N/A	231 lbs.
HL80SK	75 Gal.	24"	64¾"	57⅛"	33"	19¼"	8"	5"	5"	297 lbs.
HL119SK	110 Gal.	28"	65¼"	57¾"	33¾"	16¼"	8¾"	5"	6½"	397 lbs.

NOTES: Potable outlet water temperature at 135° F as per D.O.E. • Boiler output should be at least 74,000 BTU/h.

First Hour Rating (Gal) @ Coil Output (Btu/hr)

MODEL	180°F / 6 GPM*	180°F / 10 GPM*	180°F / 12 GPM*	200°F / 6 GPM*	200°F / 8 GPM*	200°F / 10 GPM*	200°F / 12 GPM*
HL30SK	107 @ 53,000	114 @ 57,000	117 @ 59,000	129 @ 67,000	132 @ 69,000	136 @ 71,000	139 @ 73,000
HL40SK	141 @ 69,000	165 @ 84,000	177 @ 92,000	171 @ 88,000	183 @ 96,000	195 @ 104,000	207 @ 111,000
HL50SK	148 @ 69,000	172 @ 84,000	184 @ 92,000	178 @ 88,000	190 @ 96,000	202 @ 104,000	214 @ 111,000
HL80SK	188 @ 76,000	212 @ 91,000	224 @ 98,000	221 @ 97,000	233 @ 104,000	245 @ 112,000	257 @ 119,000
HL119SK	220 @ 76,000	244 @ 91,000	256 @ 98,000	253 @ 97,000	265 @ 104,000	277 @ 112,000	289 @ 119,000

NOTES: First Hour Rating = First Draw + Continuous Draw * Coil Input (temperature, flow rate). Ratings based on 77°F rise with 58°F inlet potable water.
All data obtained through testing in accordance with GAMA INDIRECT-FIRED WATER HEATER TESTING STANDARD IWH-TS-1_MARCH 2003

Additional Boiler Model Notes:

	15B	FSB	KSW	KSC	16	41J
• Selection of water boiler size should be based upon Net I=B=R Rating being equal to or greater than the calculated heat loss of the building.	✔	✔	✔			✔
• Selection of steam boiler size should be based upon Net I=B=R Steam Rating being equal to or greater than the installed radiation in square feet EDR.				✔	✔	✔
• The ratings marked Net I=B=R Ratings represent the portion of the heat output that can be applied to heat the radiation or terminal units.	✔	✔	✔	✔	✔	✔
• Ratings based on selection factors recommended by Hydronics institute for piping and pickup. Net water boiler ratings are based on an allowance of 1.15, and net steam boiler ratings are based on an allowance of 1.33. For water applications with high piping and pickup requirements, use steam rating.	✔	✔	✔			✔
• Ratings based on selection factors recommended by Hydronics institute for piping and pickup. Net steam boiler ratings are based on an allowance of 1.33.				✔	✔	✔

	15B	FSB	KSW	KSC	16	41J
• All boilers are design-certified for installation on non-combustible floors.	✔	✔	✔	✔	✔	✔
• For installation on any combustible floor, use combustible floor kit. If combustible floor kit is unavailable refer to installation manual for specific instructions for that model.	✔	✔			✔	✔
• Recommended chimney height 20 feet. In special cases where conditions permit, chimney height may be reduced. Refer to the latest revision of National Fuel Gas Code.	✔	✔	✔	✔	✔	✔
• Electrical service to be 120 volts, 15 amps, 60Hz3.	✔	✔	✔	✔	✔	✔
• Manufacturer should be consulted on installations having other than normal piping and pickup requirements.	✔	✔	✔	✔	✔	✔

Specifications and dimensions for all Pennco SILVER models are subject to change without notice.

PENNCO

An ISO 9001-2000 Certified Company

ecr

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PN 240004958 REV 2/11