Form No. 7500-5
(Rev. 10/96)

Bryan “Flexible Water Tube”

AB Series Steam Boilers

900,000 to 2,500,000 BTUH
Forced draft gas, oil or dual fuel fired

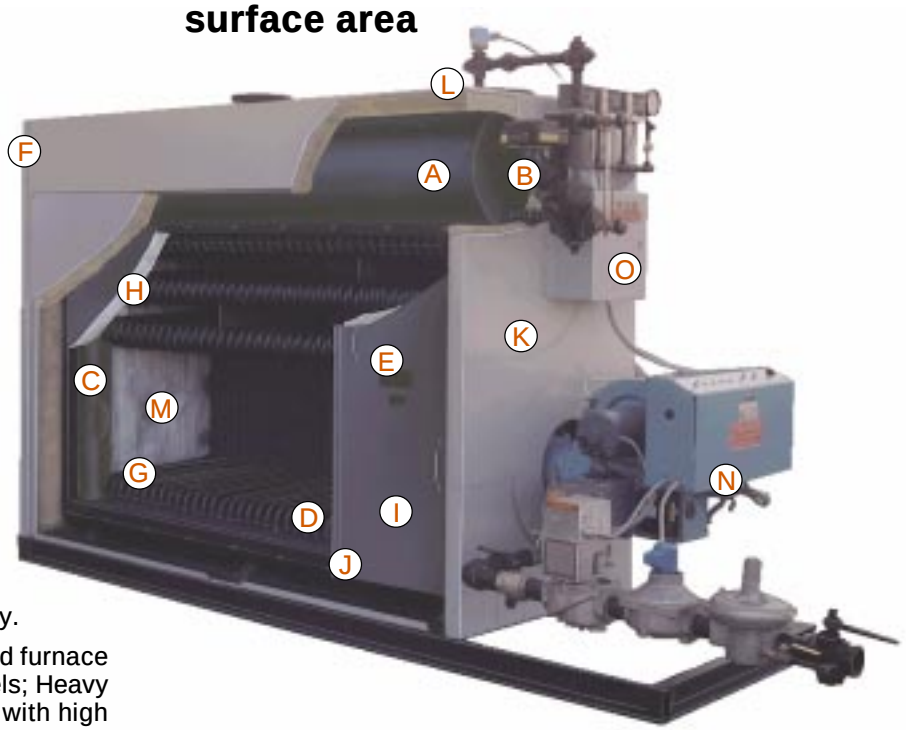
BRYAN BOILERS

Originators of the “Flexible Water Tube” design

Performance efficiency breakthrough for commercial/industrial applications

High efficiency steam heat guaranteed Featuring Bryan's "flexible water tube" design

- **True bent water tube**
- **High quality steam for heat or process**
- **Pressurized firing for high efficiency**
- **Full 5 sq ft per BHP heating surface area**



Quality Construction Features

A Heavy steel boiler frame, built and stamped in accordance with the appropriate ASME Boiler Code.

B Extra large drum with high steam release area ensures stable water level and dry steam.

C Large volume water leg downcomers promote rapid internal circulation for efficient heat transfer.

D Bryan bent water tubes are flexible, individually replaceable without welding or rolling.

E Water cooled furnace with low heat release.

F Water and steam side interior accessible for cleanout and inspection, front and rear openings, upper and lower drum.

G Pressurized design: Inner fireside casing constructed of heavy gauge steel, completely seal welded, lined with high temperature insulation and refractory.

H Boiler tube and furnace area access panels; Heavy gauge steel lined with high temperature insulation and refractory, bolted and tightly sealed to boiler frame.

I Access panel: Front panels provide easy access for inspection, cleaning and access to burner head.

J Single side access: Combustion chamber, tubes and burner head are completely accessible from one side, simplifying maintenance, minimizing floor space.

K Heavy gauge steel boiler jacket with rust resistant zinc coating and enamel finish. Insulated with fiberglass to ensure exceptionally cool outer surface.

L Minimum sized flue vent.

M Rear flame observation port.

N Forced draft, flame retention head type burner. Efficient combustion of oil or gas, quiet operation.

O Control panel: All controls installed and connected to terminal strip.

Bryan AB Series Boiler Specifications

BOILER MODEL NUMBER	INPUT MBH (KW)	NOMINAL OUTPUT		STEAM OUTPUT LBS/HOUR**	HEATING SURFACE SQ. FT. (m^2)	APPROXIMATE SHIPPING WT. LBS (KG)
		MBH (KW)*	BHP*			
AB 90-S	900 (263.7)	720 (211.0)	21	742	113 (10.5)	2,600 (1,180)
AB 120-S	1,200 (351.6)	960 (281.3)	29	990	148 (13.8)	3,050 (1,383)
AB 150-S	1,500 (439.5)	1,200 (351.6)	36	1,237	184 (17.1)	3,500 (1,587)
AB 200-S	2,000 (586.0)	1,600 (468.8)	48	1,649	244 (22.6)	4,150 (1,882)
AB 250-S	2,500 (732.5)	2,000 (586.0)	60	2,062	303 (28.2)	4,800 (2,177)

* NOTE: Nominal output based on boiler industry standard of 80% of input. Actual combustion efficiencies will be higher and fuel dependent.

**Lbs steam per hour from end at 212°F.

Guaranteed high efficiency performance and easy maintenance insure low cost operation

All Bryan AB Series steam boilers offer these operating and performance features

Guaranteed efficiency
The breakthrough in water tube boiler design that produced the AB Series provides operating efficiency so reliable, we guarantee it to be 82%* or better.

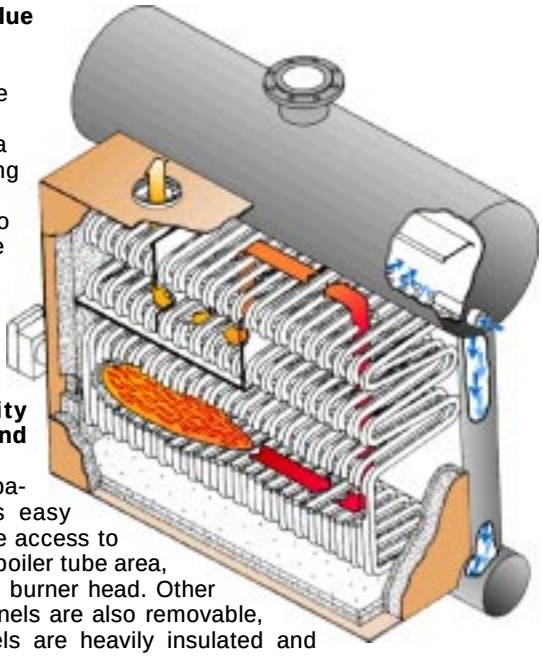
The Bryan Flexible Tube
The Bryan "Flexible Tube" design promotes high velocity internal circulation, aiding in high heat transfer and boiler efficiency. Tubes are easily removable and replaceable, without welding or rolling, eliminating expensive and long "down-time" for repairs if required.

Compact design, minimum floorspace
With our compact water tube design, the overall size of the unit is less than most other types of boilers, yet maintains a full five square feet of heating surface area per HP. Needing only 24" for tube removal, and on only one side of the boiler, the AB Series boiler occupies very little space in the boiler room. This can result in considerable savings in building costs. Pressurized firing permits minimum sized breaching and vent.

Positive internal circulation
Each pass of the Bryan water tube slopes upward. This configuration, along with the large volume downcomer water legs, provides extremely rapid natural thermal internal circulation, promoting both high efficiency of heat transfer and uniform temperature throughout the boiler.

* 15 psi steam.

Multi-pass flue gas travel
High velocity four-pass flue gas travel is obtained by a unique baffling system. This contributes to maximum fire side heat transfer and overall high boiler efficiencies.



Accessibility of furnace and tube area
Bolted inner panel provides easy and complete access to furnace and boiler tube area, as well as to burner head. Other tube side panels are also removable, and all panels are heavily insulated and sealed to boiler frame. All access is from only one side.

Large steam drum
The steam drum has generous water volume and steam release area. This design, along with effective drum internal functions, results in a stable water level and produces extremely dry steam at all load conditions.

Water cooled furnace

The configuration of the water tubes provides a water cooled combustion chamber. A high percentage of the heating surface is exposed to direct radiant heat, increasing water velocities and heat transfer.

Bryan AB Series Boilers Standard and Optional Equipment

STANDARD EQUIPMENT FURNISHED

Gas fired, forced draft
Combination low water cutoff and pump control, auxiliary low water cutoff, high limit pressure control, ASME-rated safety valve, water glass set, electronic combustion safety control, automatic operating gas valve, safety gas valve, pilot solenoid valve, pilot ignition assembly, main manual shutoff valve, pilot cock, pilot and main gas pressure regulators, air safety switch, steam pressure gauge, steam pressure control, heavy gauge jacket with heavy fiberglass insulation, all controls mounted and wired to terminal strip.

Oil fired, forced draft
Combination low water cutoff and pump control, auxiliary low water cutoff, high limit pressure control, ASME-rated safety valve, water glass set, electronic combustion safety control, oil valve, oil ignition transformer, two-stage fuel unit, oil ignition and nozzle assembly, steam pressure gauge, steam pressure control, heavy gauge jacket with heavy fiberglass insulation, all controls mounted and wired to terminal strip.

Combination gas-oil forced draft
Combination low water cutoff and pump control, auxiliary low water cutoff, high limit pressure control, ASME-rated safety valve, water glass set, electronic combustion safety control, automatic operating gas valve, safety gas valve, pilot solenoid valve, pilot ignition assembly, main manual gas shutoff valve, pilot cock, pilot and main gas pressure regulators, air safety switch, manual fuel selector switch, oil valve, two-stage fuel unit, oil nozzle assembly, steam pressure gauge, steam pressure control, heavy gauge jacket with heavy fiberglass insulation, all controls mounted and wired to terminal strip.

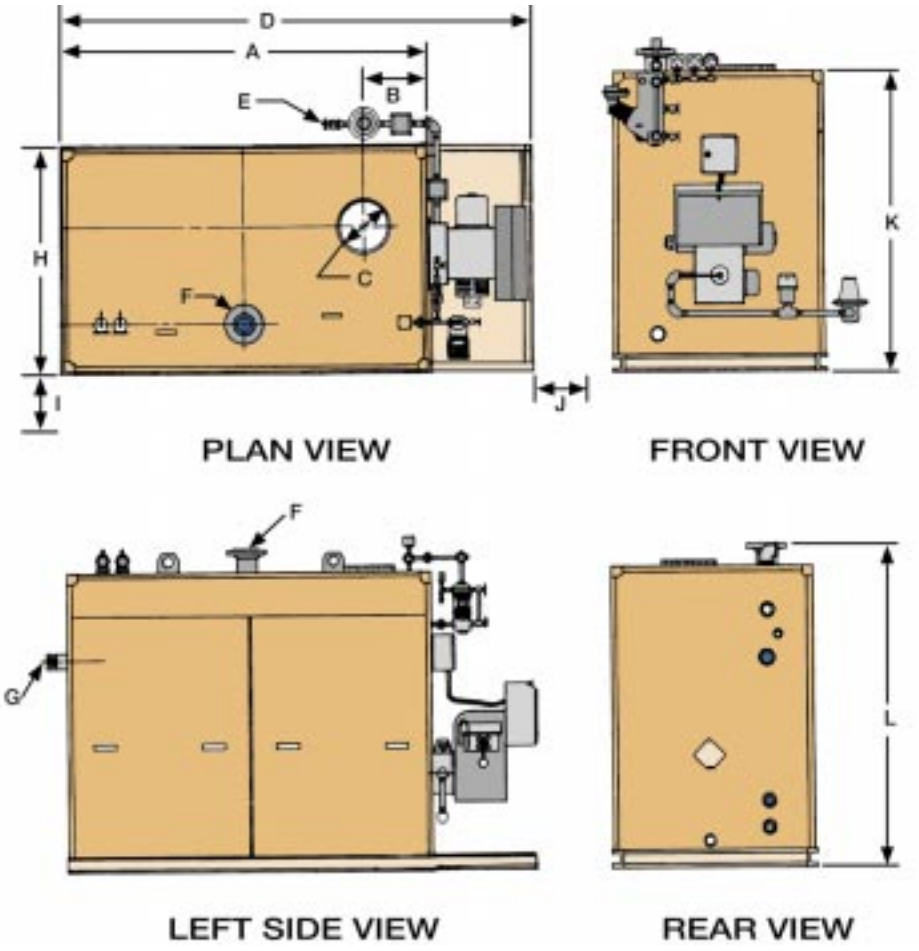
OPTIONAL EQUIPMENT, EXTRA COST

[1] Manual reset high limit control, installed
[2] Manual reset low water cutoff
[3] Alarm bells or horns
[4] FM, IRI, CSD-I or other insurance approved control systems
[5] Indicating lights, as desired
[6] Lead-lag systems for two or more boilers
[7] Draft control system
[8] Low NO_x package

When ordering, please specify:

[1] Electric power voltage, phase and frequency
[2] Boiler relief valve setting
[3] Type of gas, BTU content, specific gravity and pressure available
[4] Optional extra equipment or construction
[5] Special approvals required (FM, IRI or other)
[6] Altitude

Bryan AB Series Steam Heating/Processing Boilers



DIMENSIONS in inches (cm)

Boiler Model Number	A Length of Jacket	B Flue Location	C Flue Size	D Overall Length	E Gas Train Conn.	F Supply Connection 15#	F Supply Connection 150#	G Feed Connection	H Width Outside Jacket	I Min. Tube Removal Clearance	J Clearance for Servicing Burner	K Height Over Jacket	L Floor to Flow Nozzle
AB 90-S	44 15/16 (114.1)	12 (30.5)	10 (25.4)	76 (193.0)	1 1/4 (3.2)	4 FLG (10.16)	3 NPT (7.62)	1 1/2 NPT (3.81)	38 1/2 (97.79)	24 (60.9)	36 (91.4)	77 1/4 (196.21)	79 5/8 (202.24)
AB 120-S	54 3/16 (137.6)	12 (30.5)	10 (25.4)	85 3/8 (216.8)	1 1/4 (3.2)	4 FLG (10.16)	3 NPT (7.62)	1 1/2 NPT (3.81)	38 1/2 (97.79)	24 (60.9)	36 (91.4)	77 1/4 (196.21)	79 5/8 (202.24)
AB 150-S	63 1/2 (161.3)	12 (30.5)	10 (25.4)	94 3/4 (260.7)	1 1/2 (3.8)	6 FLG (15.24)	3 NPT (7.62)	1 1/2 NPT (3.81)	38 1/2 (97.79)	24 (60.9)	36 (91.4)	77 1/4 (196.21)	79 5/8 (202.24)
AB 200-S	78 15/16 (200.5)	16 1/2 (41.9)	10 (25.4)	110 (279.4)	2 (5.1)	6 FLG (15.24)	3 NPT (7.62)	1 1/2 NPT (3.81)	38 1/2 (97.79)	24 (60.9)	36 (91.4)	77 1/4 (196.21)	79 5/8 (202.24)
AB 250-S	94 7/16 (239.9)	15 (38.1)	12 (30.5)	125 1/2 (318.8)	2 (5.1)	6 FLG (15.24)	3 NPT (7.62)	1 1/2 NPT (3.81)	38 1/2 (97.79)	24 (60.9)	36 (91.4)	77 1/4 (196.21)	79 5/8 (202.24)

Specifications subject to change without notice. Consult factory to consult on other boiler options.

BRYAN BOILERS

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