Form No. 7200-3/5
(Rev. 3/01)

Bryan "Flexible Water Tube"

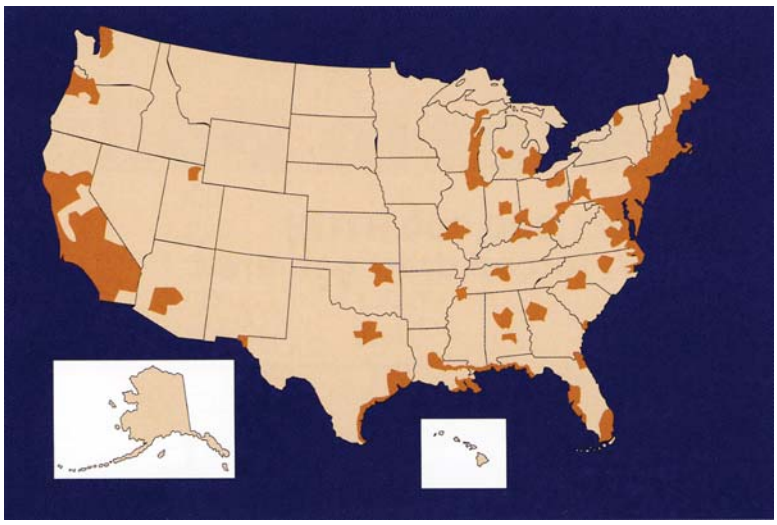
COMPLIANCE+®
Water and Steam Boilers

900,000 to 21,000,000 BTUH
LX Type Low NO_X forced draft gas fired

BRYAN BOILERS

Originators of the "Flexible Water Tube" design

Non-compliance penalties enacted



Targeted non-compliance areas per the EPA.

Clean Air Act Amendments passed in 1990 make violations a felony with fines up to $500,000 per day per violation. One provision sets maximum limits for nitrogen oxide emissions from boilers. Bryan Steam announces a complete new line of hot water and steam boilers to meet and exceed those standards.

Tough standards for boilers — Four fifths of the nitrogen oxides in our atmosphere today are man made and 60% of those are attributed to industrial, commercial and residential combustion sources. Increasing numbers of states are implementing standards that require less than 30 ppm nitrogen oxides. ***Bryan has the solution.***

BRYAN COMPLIANCE+® BOILERS

AB Series

Hot water and steam* boilers. Forced draft gas fired for medium sized applications. Hot water models or steam from 900 MBH input (21 BHP) to 2,500 MBH input (60 BHP).

RV Series

Forced draft gas hot water and steam boilers*. Multi-pass flue gas travel for maximum heat extraction. Capacities of 2,000 MBH input (48 BHP) to 8,000 MBH input (191 BHP).

RW Series

Forced draft gas fired hot water and steam boilers*. Bryan's largest boilers for the big heating requirements. Sizes from 8,500 MBH input (200 BHP) to 21,000 MBH input (500 BHP).

**Bryan steam boilers are available as standard 15 psi MWP or 150 psi MAWP.*

Quality standard features of BRYAN BOILERS

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 even if required.

Compact design, minimum floor space
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 sq ft of heating surface per boiler HP. Needing minimum space for tube removal, Bryan boilers occupy less floor space in the boiler room. This results in considerable savings in building costs. Pressurized firing permits minimum sized breeching and vent.

Positive internal circulation
Each pass of the Bryan water tube slopes upward. This configuration, along with 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.

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

Accessible furnace and tube area
Removable inner panels provide easy and complete access to furnace and boiler tube area. Other tube side panels are also removable and all panels are heavily insulated and sealed to the boiler frame.

Large steam drum
On steam boilers, the drum has generous water volume and steam release area. This feature, along with effective internal designs, results in a stable water level and produces extremely dry steam at all load conditions.

Thermal blend water return
As an optional feature on water boilers, Bryan's unique thermal blend return blends cold or cooler return water with warmer boiler water bringing it to design operating temperatures. An injector tube directs the mixed water flow through the downcomer to the lower header and heating surfaces at a temperature above possible condensing conditions. This reduces the possibility of cold spots and damage from corrosive condensation.

20 year warranty
Because of the proven effectiveness of the flexible water tube design in eliminating thermal shock damage, every Bryan flexible tube water boiler is warranted for 20 years, *non-prorated*, against pressure vessel damage due to thermal shock.

How they reduce NO_x levels

Flexible water tube efficiency plus advanced burner technology

Bryan type LX boilers combine the inherent efficiency of the Bryan flexible tube boiler concept with the latest burner technologies to reduce nitrogen oxide emissions. The flexible water tubes assure maximum heat transfer and optimized performance so that the combustion process generates minimum emissions. Bryan design fine tunes the mating of boiler performance to your choice of the leading burner manufacturers' NO_X reducing systems. These technologies include control of flame temperature, oxygen minimization, staged combustion, internal gas diffusion, and internal recirculation of gases. External flue gas recirculation is not necessary in most cases, reducing initial investment and operating and maintenance costs.

Bryan Compliance+
Flexible Water Tube Boilers Specifications

Boiler Model No.	Input MBH	Nominal Output MBH	Nominal Boiler Horsepower
AB-90	900	720	21
AB-120	1,200	960	29
AB-150	1,500	1,200	36
AB-200	2,000	1,600	48
AB-250	2,500	2,000	60
RV-200	2,000	1,600	48
RV-250	2,500	2,000	60
RV-300	3,000	2,400	72
RV-350	3,500	2,800	84
RV-400	4,000	3,200	96
RV-450	4,500	3,600	108
RV-500	5,000	4,000	120
RV-550	5,500	4,400	131
RV-600	6,000	4,800	143
RV-700	7,000	5,600	167
RV-800	8,000	6,400	191
RW-850	8,500	6,800	200
RW-1050	10,500	8,400	250
RW-1260	12,600	10,080	300
RW-1500	15,000	12,000	350
RW-1700	17,000	13,600	400
RW-1900	19,000	15,200	450
RW-2100	21,000	16,800	500

** All Bryan Compliance+ Boilers are furnished with low NO_x burner package. Underwriters Laboratories listing for Boiler Assemblies with Emission Reduction Equipment available on most models.*

Standard Equipment

Gas Fired Forced Draft Water Boilers

Combination thermometer and altitude gauge, ASME Code rated boiler relief valve, water temperature control (240°F Max. Std.), high limit control, probe low water cutoff, electronic combustion safety control, pre-purge, automatic operating gas valve, safety gas valve, pilot solenoid valve, pilot ignition assembly, main manual gas shut-off valve, pilot cock, pilot and main gas pressure regulators, air safety switch, control panel, all controls installed and wired, standard full modulation with proven low fire start and characterized fuel metering.

Gas Fired Forced Draft Steam Boilers

Combination thermometer and pressure gauge, ASME Code rated pop safety relief valve(s), pressure control, high limit control, low water cut-off/pump control, auxiliary probe type low water cut-off, electronic combustion safety control, pre-purge, automatic operating gas valve, safety gas valve, pilot solenoid valve, pilot ignition assembly, main manual gas shut-off valve, pilot cock, pilot and main gas pressure regulators, air safety switch, control panel, all controls installed and wired, standard full modulation with proven low fire start and characterized fuel metering.

Optional Equipment, Extra Cost

Manual reset high limit control — installed, manual reset low water cut-off, alarm bells or horns, UL, FM, IRI, or other insurance approved control systems, indicating lights, lead-lag systems for two or more boilers with or without outdoor reset control, draft control system, oxygen trim system.

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