

Bryan "Flexible Water Tube" D Series Steam Boilers

250,000 to 650,000 BTUH
Forced draft gas, oil or dual fuel fired

Construction Features

1. Heavy steel boiler frame, built and stamped in accordance with the A.S.M.E. Boiler Code. Constructed as standard for operating pressures of 15 psi or 150 psi. Also available for higher operating pressures. Large steam release area for dry steam.
2. Water leg downcomers to insure rapid internal circulation and temperature equalization.
3. Bryan flexible water tubes, easily replaceable, requiring no welding or rolling.
4. Access panel, interior of boiler easily accessible for service and inspection.
5. Boiler tube access panel bolted tightly and sealed to boiler frame. Constructed of high temperature insulation in steel framework. Tubes installed from one side.
6. Boiler frame insulated with 1½" thick insulating refractory.
7. Boiler jacket, heavy gauge, zinc-coated, rust resistant primer and attractive enamel.
8. All controls, gauges and relief valve are on boiler top for ease in servicing.
9. Flange mounted forced draft gas, oil or dual fuel fired burner.
10. All controls factory installed and wired.



All Bryan D series steam boilers are available from stock for immediate shipment. Consult your local Bryan representative for delivery information.

Specifications

BOILER MODEL NUMBER	Input		Nominal Output		Lbs. Steam Per Hour From & At 212°F	Heating Surface Sq. Ft.	Shipping Weight (Pounds)
	MBH	Oil Gallons Per Hour	MBH	Boiler H.P.			
D-250-S	250	1.75	200	6	206	22	850
D-450-S	450	3.25	360	10	370	40	1,080
D-650-S	650	4.50	520	15	535	58	1,400



BRYAN BOILERS

Originators of the "Flexible Water Tube" design



Bryan D Series Gas, Oil or Dual Fuel Fired Steam Boilers

Efficient Water Tube Design

The Bryan Flexible Water Tube provides for extremely fast internal circulation for maximum heat transfer and operating efficiency. Flexible—no thermal shock.

Easily Replaceable Tubes

Tubes are easily removable and replaceable without welding or rolling. Require little service space.

Steam Release Area

Large, full-size steam drum provides for dry steam and stable water level.

Natural Internal Circulation

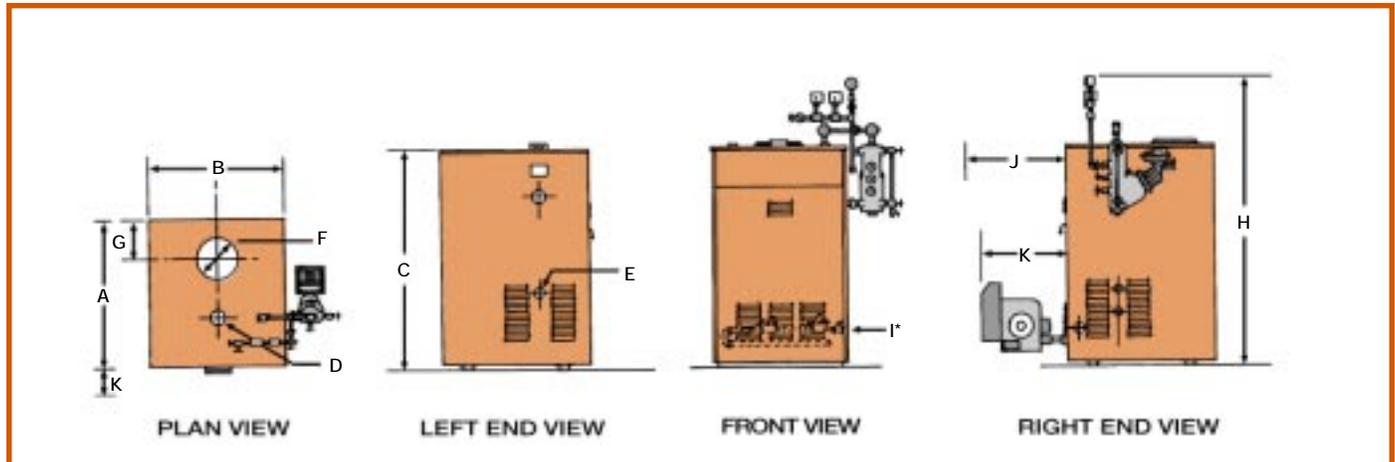
The water tube design and the large water leg downcomers provide adequate internal circulation. Low pressure drop through boiler.

Compact—Minimum Floor Space

Requires less floor space than most boilers—minimum boiler room size. Shipped completely assembled and wired.

High or Low Pressure Construction

Boiler is constructed as standard for either 15 psi or 150 psi maximum working pressure. Also available for higher pressures.



DIMENSIONS—Inches (Metric)

BOILER MODEL	A	B	C	D		E	F	G	H	I	J	K		
	Length Over Jacket	Width Over Jacket	Height Over Jacket	Flow Nozzle		Feedwater Conn.	Flue Size	Flue Location	Height Over Controls	Gas Train Connector	Tube Removal Space	Burner Extension		
				15 psi	150 psi							Oil	Gas	G/O
D-250-S (1)	35 (88.90)	24 (60.96)	52½ (133.35)	NA (1)	1½ NPT (3.81)	1½ NPT (3.81)	6 (15.24)	9½ (24.13)	66¾ (169.6)	¾ (1.91)	24 (60.96)	—	10½ (26.67)	—
D-450-S	35 (88.90)	32 (81.28)	52½ (133.35)	3 NPT (7.62)	1½ NPT (3.81)	1½ NPT (3.81)	8 (20.32)	9½ (24.13)	66¾ (169.6)	1 (2.54)	24 (60.96)	—	10½ (26.67)	30 (76.20)
D-650-S	35 (88.90)	40 (121.92)	52½ (133.35)	4 NPT (10.16)	2 NPT (5.08)	1½ NPT (3.81)	8 (20.32)	9½ (24.13)	66¾ (169.6)	1 (2.54)	24 (60.96)	5 (12.70)	10½ (26.67)	30 (76.20)

*Gas train and control location dimensions will vary depending on job specifications and conditions. Dimensions and specifications are subject to change without notice. Consult factory for certified dimensions. (1) Not available in 15 psi construction.

Standard Equipment Furnished

Gas fired, forced draft

Combination low water cut-off and pump control, auxiliary low water cut-off, high limit pressure control, ASME-rated safety valve, water glass set, electronic pilot safety controls, automatic operating gas valve, safety gas valve, pilot solenoid valve, flame rod and pilot ignition assembly, main manual shut-off valve, pilot cock, pilot and main gas pressure regulators, air safety switch, steam pressure gauge, steam pressure control, heavy ga. jacket, all controls mounted and wired to terminal strip.

Oil fired, forced draft

Combination low water cut-off and pump control, auxiliary low water cut-off, 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 ga. jacket, all controls mounted and wired to terminal strip.

Combination gas-oil forced draft

Combination low water cut-off and pump control, auxiliary low water cut-off, 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, flame rod and pilot ignition assembly, main manual gas shut-off valve, pilot cock, pilot and main gas pressure regulators, air safety switch,

manual fuel selector switch, oil valve, oil ignition transformer, two-stage fuel unit, oil ignition and nozzle assembly, steam pressure gauge, steam pressure control, heavy ga. jacket, all controls mounted and wired to terminal strip.

Optional Equipment, Extra Cost

Consult factory

When ordering, please specify

1. Electric power voltage and frequency.
2. Low pressure 15 psi, or high pressure, 150 psi construction.
3. Type of fuel, BTU content, specific gravity and pressure(s) available.
4. Optional extra equipment or construction and special approvals required (FM, IRI, CSD-1, etc.)



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