

# Specifications

*Advanced Steam Boiler Technology  
that is Safe, Efficient and Reliable*

## CLAYTON STEAM GENERATORS OFFER:

- **COMPACT SIZE**

Clayton steam generators will normally fit in any available area while also reducing construction costs on new building installations.

- **FUEL EFFICIENT**

High efficiency which is inherent with the clayton design translates into lower operating costs and improved overall system operation

- **RESPONSIVE**

Very rapid response to changing steam loads. Clayton steam generator will automatically modulate to match your steam load profile while maintaining system steam pressure

- **SAFE**

Our once through design eliminates the possibility of a steam or water side explosion. The Clayton steam generator is simply the safest steam boiler on the market.

- **LESS WATER WASTE**

Clayton's design concentrates TDS blow down significantly which reduces wasted fuel, water and chemical costs.

- **FAST START**

Full steam pressure and output in minutes from a cold start-up saves fuel and labor cost over conventional designs. Eliminates wasted fuel from idling.

- **AUTOMATIC**

Operation is automatically controlled and the Clayton steam generator can be started from a single switch or remotely using an automatic start option.

- **LOW WEIGHT**

The relatively light weight means that all sizes of Clayton steam generators can be easily moved and installed even in areas with limited structural support.

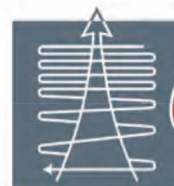
- **RELIABLE**

Reliability of the Clayton steam generator is field proven and unsurpassed. This results in greatly reduced maintenance and attendance.

- **HIGH QUALITY STEAM**

Steam Quality in excess of 99.5% dry is assured at all times. This is the highest steam quality of any competitive design. Less water and impurities further increase your energy efficiency.

## **MODEL E254 STEAM GENERATOR 250 BHP**



**Clayton**  
INNOVATIVE STEAM SOLUTIONS

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# SPECIFICATIONS

## MODEL E254

	MODEL E254 Standard	MODEL SE254 with Super Economizer	MODEL EG254-FMB with Low NOx Burner	MODEL SE254 - FMB with Low NOx Burner and Super Economizer
BOILER HORSEPOWER	250	250	250	250
HEAT INPUT, BTU/hr	10,082,831	9,731,105	10,082,831	9,731,105
Oil				
Gas	10,205,79	9,845,588	10,205,793	9,845,588
NET HEAT OUTPUT, BTU/hr	8,368,750	8,368,750	8,368,750	8,368,750
EQUIVALENT OUTPUT (from and at 212°F feedwater and 0 PSIG steam)	8,625 lbs/hr	8,625 lbs/hr	8,625 lbs/hr	8,625 lbs/hr
DESIGN PRESSURE (see note 1)	15 - 500 psig	15 - 500 psig	15 - 500 psig	15 - 500 psig
STEAM OPERATING PRESSURE (determined by design pressure)	13 - 450 psig	13 - 450 psig	13 - 450 psig	13 - 450 psig
OIL CONSUMPTION	71.7 gph	69.2 gph	71.7 gph	69.2 gph
at maximum steam output (see note 2)				
GAS CONSUMPTION	10,206 cfh	9,846 cfh	12,398 cfh	11,815 cfh
at maximum steam output (see note 3)				
BURNER CONTROLS				
modulating	5 to 1 Turndown	5 to 1 Turndown	4 to 1 Turndown	4 to 1 Turndown
EFFICIENCY				
oil-fired efficiency %	83%	86%	83%	86%
gas-fired efficiency %	82%	85%	82%	85%
ELECTRIC MOTORS, HP	Blower   Pump	Blower   Pump	Blower   Pump   Cooling	Blower   Pump   Cooling
design pressure 15-300 psig	10   10	10   10	15   10   5	15   10   5
design pressure 301-500 psig	10   15	10   15	15   15   5	15   15   5
ELECTRIC FLA, based on 460 V (see note 4)				
design pressure 15-300 psig	35	35	42	42
design pressure 301-500 psig	42	42	59	59
GAS SUPPLY PRESSURE REQUIRED	5 to 10 psig	5 to 10 psig	5 to 10 psig	5 to 10 psig
ATOMIZING AIR REQUIRED (see note 5)				
Capacity	25 scfm	25 scfm	25 scfm	25 scfm
Minimum pressure	70 psig	70 psig	70 psig	70 psig
AIR SUPPLY REQUIRED (FMB -see note 6)	N/A	N/A	N/A	N/A
WATER SUPPLY REQUIRED	1,325 gph	1,325 gph	1,325 gph	1,590 gph
HEATING SURFACE	473 sq.ft.	610 sq.ft.	473 sq.ft.	610 sq.ft.
EXHAUST STACK CONNECTION, o.d.	24 in.	24 in.	24 in.	24 in.
APPROXIMATE OVERALL DIMENSIONS				
length	115 in.	115 in.	115 in.	115 in.
width	96 in.	96 in.	109 in.	109 in.
height	102 in.	121 in.	121 in.	135 in.
WEIGHT				
installed - wet	8,427 lbs	10,935 lbs	8,427 lbs	10,084 lbs
shipping	7,410 lbs	9,440 lbs	7,410 lbs	7,198 lbs
FW pump skid	1,050 lbs	1,050 lbs	1,050 lbs	1,050 lbs

1) Design pressures are available up to 3000 psig. Consult factory for details.

2) Based on No. 2 fuel oil with a High Heat Value (HHV) of 140,600 BTU/Gal.

3) Based on Natural Gas with a High Heat Value (HHV) of 1,000 BTU/Ft.<sup>3</sup>

4) Oil fired units also use a separate motor driven fuel oil pump - 1/2 HP

5) Continuous running. For 575 V multiply by 0.8; for 380 V multiply by 1.1; for 230 V multiply by 2.0; for 208 V multiply by 2.2.

6) Atomizing air required for oil burner.

7) Compressed air required for FMB.

The description and specifications shown were in effect at the time this publication was approved for printing. Clayton Industries, whose policy is one of continuous improvement, reserves the right to discontinue models, or change specifications or design, without notice.



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