

# 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.

## *SIGMA-FIRE SF125 STEAM GENERATOR 125 BHP*



**Clayton**  
INNOVATIVE STEAM SOLUTIONS

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# SPECIFICATIONS

## MODEL SF125

	MODEL SF125 Standard	MODEL SF125-SE with Super Economizer	MODEL SF125-FMB with Low NOx FMB Burner	MODEL SF125-SE-FMB with Low NOx FMB Burner and Super Economizer
<b>BOILER HORSEPOWER</b>	125	125	125	125
<b>HEAT INPUT, BTU/hr</b>				
Oil	5,041,416	4,865,552	NA	NA
Gas	5,102,896	4,922,794	5,165,895	4,922,794
<b>NET HEAT OUTPUT, BTU/hr</b>	4,184,375	4,184,375	4,184,375	4,184,375
<b>EQUIVALENT OUTPUT (from and at 212°F feedwater and 0 PSIG steam)</b>	4,313 lbs/hr	4,313 lbs/hr	4,313 lbs/hr	4,313 lbs/hr
<b>DESIGN PRESSURE (see note 1)</b>	15 - 500 psig	15 - 500 psig	15 - 500 psig	15 - 500 psig
<b>STEAM OPERATING PRESSURE (determined by design pressure)</b>	13 - 450 psig	13 - 450 psig	13 - 450 psig	13 - 450 psig
<b>OIL CONSUMPTION at maximum steam output (see note 2)</b>	35.9 gph	34.6 gph	NA	NA
<b>GAS CONSUMPTION at maximum steam output (see note 3)</b>	5,103 cfh	4,923 cfh	5,166 cfh	4,923 cfh
<b>BURNER CONTROLS</b>				
step-fired	100% / 50% / Off	100% / 50% / Off	N/A	N/A
modulating (see note 4)	5 to 1 Turndown	5 to 1 Turndown	4 to 1 Turndown	4 to 1 Turndown
<b>EFFICIENCY</b>				
oil-fired efficiency %	83%	86%	NA	NA
gas-fired efficiency %	82%	85%	81%	85%
<b>ELECTRIC MOTORS, HP (see note 5)</b>	Blower   Pump	Blower   Pump	Blower   Pump   Cooling	Blower   Pump   Cooling
design pressure 15-150 psig	7.5   5	7.5   7.5	10   5   3	10   7.5   3
design pressure 200-500 psig	7.5   7.5	7.5   7.5	10   7.5   3	10   7.5   3
<b>ELECTRIC FLA, based on 460 V (see note 6)</b>				
design pressure 15-300 psig	24	24	33	33
design pressure 301-500 psig	28	28	36	36
<b>GAS SUPPLY PRESSURE REQUIRED</b>	2 psig	2 psig	2 psig	2 psig
<b>AIR SUPPLY REQUIRED (FMB - see note 7)</b>	NA	NA	5 scfm @ 3 to 150 psig	5 scfm @ 3 to 150 psig
<b>WATER SUPPLY REQUIRED</b>	663 gph	663 gph	663 gph	663 gph
<b>HEATING SURFACE</b>	279 sq.ft.	360 sq.ft.	279 sq.ft.	360 sq.ft.
<b>EXHAUST STACK CONNECTION, o.d.</b>	12 in.	12 in.	12 in.	12 in.
<b>APPROXIMATE OVERALL DIMENSIONS</b>				
length	73 in.	73 in.	92 in.	92 in.
width	76 in.	76 in.	73 in.	73 in.
height	92 in.	106 in.	92 in.	106 in.
<b>WEIGHT</b>				
installed - wet	4,767 lbs	5,245 lbs	4,847 lbs	5,325 lbs
shipping	4,300 lbs	4,670 lbs	4,380 lbs	4,750 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) On dual fuel units only gas fired is modulating, oil fired is step fired. Switching fuels requires a manual change of burners

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

6) 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.

7) Compressed air required for FMB only.

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.



**World Headquarters**  
17477 Hurley Street  
City of Industry, CA 91744  
800.423.4585 tel • 626.435.0180 fax  
email: sales@claytonindustries.com  
www.claytonindustries.com

**Europe, Africa & Middle East Headquarters**  
Rijksweg 30 • B-2880 Bornem, Belgium  
32.3.890.5700 tel • 32.3.890.5701 fax  
email: sales@clayton.be

**Latin America Headquarters**  
Manuel L. Stampa 54 • Nueva Industrial Vallejo  
Mexico D.F., 07700 Mexico  
Toll Free: 01.800.888.4422 • (55)55.86.51.00 tel  
(55)55.86.23.00 fax • email: claytonmexico@clayton.com.mx  
www.claytonmexico.com.mx

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