

# 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 SF150 STEAM GENERATOR 150 BHP



**Clayton**  
INNOVATIVE STEAM SOLUTIONS

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# SPECIFICATIONS

## MODEL SF150

	MODEL SF150 Standard	MODEL SF150-SE with Super Economizer	MODEL SF150-FMB with Low NOx FMB Burner	MODEL SF150-SE-FMB with Low NOx FMB Burner and Super Economizer
<b>BOILER HORSEPOWER</b>	150	150	150	150
<b>HEAT INPUT, BTU/hr</b>	Oil 6,049,699 Gas 6,123,476	5,838,663 5,907,353	NA 6,199,074	NA 5,907,353
<b>NET HEAT OUTPUT, BTU/hr</b>	5,021,250	5,021,250	5,021,250	5,021,250
<b>EQUIVALENT OUTPUT (from and at 212°F feedwater and 0 PSIG steam)</b>	5,175 lbs/hr	5,175 lbs/hr	5,175 lbs/hr	5,175 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>	43.0 gph	41.5 gph	NA	NA
<b>GAS CONSUMPTION at maximum steam output (see note 3)</b>	6,123 cfh	5,907 cfh	6,199 cfh	5,907 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 15-300 psig	7.5   5	7.5   5	10   5   3	10   5   3
design pressure 301-500 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 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>	795 gph	795 gph	795 gph	795 gph
<b>HEATING SURFACE</b>	230 sq.ft.	314 sq.ft.	230 sq.ft.	314 sq.ft.
<b>EXHAUST STACK CONNECTION, o.d.</b>	18 in.	18 in.	18 in.	18 in.
<b>APPROXIMATE OVERALL DIMENSIONS</b>				
length	81 in.	81 in.	85 in.	85 in.
width	81 in.	81 in.	101 in.	101 in.
height	93 in.	112 in.	93 in.	112 in.
<b>WEIGHT</b>				
installed - wet	5,134 lbs	5,675 lbs	5,214 lbs	5,755 lbs
shipping	4,600 lbs	4,975 lbs	4,680 lbs	5,055 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.



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