

# 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 SF75 STEAM GENERATOR 75 BHP



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# SPECIFICATIONS

## MODEL SF75

	MODEL SF75 Standard	MODEL SF75-SE with Super Economizer	MODEL SF75-FMB with Low NOx FMB Burner	MODEL SF75-SE-FMB with Low NOx FMB Burner and Super Economizer
<b>BOILER HORSEPOWER</b>	75	75	75	75
<b>HEAT INPUT, BTU/hr</b>	Oil 3,024,849	2,919,331	NA	NA
	Gas 3,061,738	2,953,676	3,099,537	2,953,676
<b>NET HEAT OUTPUT, BTU/hr</b>	2,510,625	2,510,625	2,510,625	2,510,625
<b>EQUIVALENT OUTPUT (from and at 212°F feedwater and 0 PSIG steam)</b>	2,587 lbs/hr	2,587 lbs/hr	2,587 lbs/hr	2,587 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>	21.5 gph	20.8 gph	NA	NA
<b>GAS CONSUMPTION at maximum steam output (see note 3)</b>	3,062 cfm	2,954 cfm	3,100 cfm	2,954 cfm
<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	5   3	5   3	7.5   3   3	7.5   3   3
design pressure 301-500 psig	5   5	5   5	7.5   5   3	7.5   5   3
<b>ELECTRIC FLA, based on 460 V (see note 6)</b>				
design pressure 15-300 psig	17	17	25.3	25.3
design pressure 301-500 psig	20	20	28.4	28.4
<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>	398 gph	398 gph	398 gph	398 gph
<b>HEATING SURFACE</b>	145 sq.ft.	184 sq.ft.	145 sq.ft.	184 sq.ft.
<b>EXHAUST STACK CONNECTION, o.d.</b>	12 in.	12 in.	12 in.	12 in.
<b>APPROXIMATE OVERALL DIMENSIONS</b>				
length	63 in.	63 in.	63 in.	63 in.
width	68 in.	68 in.	68 in.	68 in.
height	86 in.	98 in.	86 in.	98 in.
<b>WEIGHT</b>				
installed - wet	3,983 lbs	4,255 lbs	3,983 lbs	4,255 lbs
shipping	3,800 lbs	4,030 lbs	3,800 lbs	4,030 lbs

1) Design pressure 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 - 1/2 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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