

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 SF50 STEAM GENERATOR 50 BHP



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SPECIFICATIONS

MODEL SF50

	MODEL SF50 Standard	MODEL SF-50-SE with Super Economizer	MODEL SF50-FMB with Low NOx FMB Burner	MODEL SF50-SE-FMB with Low NOx FMB Burner and Super Economizer
BOILER HORSEPOWER	50	50	50	50
HEAT INPUT, BTU/hr	Oil 2,016,566 Gas 2,041,159	1,946,221 1,969,118	NA 2,066,358	NA 1,969,118
NET HEAT OUTPUT, BTU/hr	1,673,750	1,673,750	1,673,750	1,673,750
EQUIVALENT OUTPUT (from and at 212°F feedwater and 0 PSIG steam)	1,725 lbs/hr	1,725 lbs/hr	1,725 lbs/hr	1,725 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 at maximum steam output (see note 2)	14.3 gph	13.8 gph	NA	NA
GAS CONSUMPTION at maximum steam output (see note 3)	2,041 cfh	1,969 cfh	2,066 cfh	1,969 cfh
BURNER CONTROLS				
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
EFFICIENCY				
oil-fired efficiency %	83%	86%	N/A	N/A
gas-fired efficiency %	82%	85%	81%	85%
ELECTRIC MOTORS, HP (see note 5)	Blower Pump	Blower Pump	Blower Pump Cooling	Blower Pump Cooling
design pressure 15-300 psig	3 2	3 2	5 2 3	5 2 3
design pressure 301-500 psig	3 3	3 3	5 3 3	5 3 3
ELECTRIC FLA, based on 460 V (see note 6)				
design pressure 15-300 psig	11	11	19.5	19.5
design pressure 301-500 psig	13	13	21	21
GAS SUPPLY REQUIRED	2.0 psig	2.0 psig	2.0 psig	2.0 psig
AIR SUPPLY REQUIRED (FMB - see note 7)	NA	NA	5 scfm @ 3 to 150 psig	5 scfm @ 3 to 150 psig
WATER SUPPLY REQUIRED	265 gph	265 gph	265 gph	265 gph
HEATING SURFACE	106 sq.ft.	145 sq.ft.	106 sq.ft.	145 sq.ft.
EXHAUST STACK CONNECTION, o.d.	12 in.	12 in.	12 in.	12 in.
APPROXIMATE OVERALL DIMENSIONS				
length	63 in.	63 in.	63 in.	63 in.
width	66 in.	66 in.	66 in.	66 in.
height	75 in.	86 in.	75 in.	86 in.
WEIGHT				
installed - wet	3,842 lbs	4,113 lbs	3,842 lbs	4,113 lbs
shipping	3,700 lbs	3,930 lbs	3,700 lbs	3,930 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.³

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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