

# 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 E1204 STEAM GENERATOR 1,200 BHP Standard and FGR**



**Clayton**  
INNOVATIVE STEAM SOLUTIONS

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# SPECIFICATIONS

## MODEL E1204

		MODEL E1204 Standard	MODEL SE1204 with Super Economizer	MODEL E1204-FGR with Flue Gas Recirculation	MODEL SE1204-FGR with Flue Gas Recirculation and Super Economizer
BOILER HORSEPOWER		1,200	1,200	1,200	1,200
HEAT INPUT, BTU/hr.	Oil	48,397,590	46,709,302	48,397,590	46,709,302
	Gas	48,987,805	47,258,824	48,987,805	47,258,824
NET HEAT OUTPUT, BTU/hr.		40,170,000	40,170,000	40,170,000	40,170,000
EQUIVALENT OUTPUT (from and at 212°F feedwater and 0 PSIG steam)		41,400 lbs/hr	41,400 lbs/hr	41,400 lbs/hr	41,400 lbs/hr
DESIGN PRESSURE (see note 1)		65 - 500 psig	65 - 500 psig	65 - 500 psig	65 - 500 psig
STEAM OPERATING PRESSURE (determined by design pressure)		60 - 450 psig	60 - 450 psig	60 - 450 psig	60 - 450 psig
OIL CONSUMPTION - gph		344.2	332.2	344.2	332.2
at maximum steam output (see note 2)					
GAS CONSUMPTION - cfh		48,988	47,259	48,988	47,259
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 (see note 4)		Blower   Pump	Blower   Pump	Blower   Pump   Cooling	Blower   Pump   Cooling
design pressure 15-300 psig		100   125	100   125	100   125   10	100   125   10
design pressure 301-500 psig		100   150	100   150	100   150   10	100   150   10
ELECTRIC FLA, based on 460 V (see note 5)					
design pressure 65-300 psig		329	329	343	343
design pressure 301-500 psig		360	360	375	375
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 6)					
Capacity		30 scfm	30 scfm	30 scfm	30 scfm
Minimum pressure		70 psig	70 psig	70 psig	70 psig
AIR SUPPLY REQUIRED (FMB -see note 7)		N/A	N/A	N/A	N/A
WATER SUPPLY REQUIRED - gph		6,360	6,360	6,360	6,360
HEATING SURFACE		2,890 sq.ft.	3,685 sq.ft.	2,890 sq.ft.	3,685 sq.ft.
EXHAUST STACK CONNECTION, o.d.		44 in.	44 in.	44 in.	44 in.
APPROXIMATE OVERALL DIMENSIONS					
Steam Generator					
length - inch		238	238	238	238
width - inch		173	173	173	173
height - inch		272	286	272	286
Installed weight- wet		53,200 lbs.	55,700 lbs.	53,500 lbs.	56,000 lbs.
Shipping weight - Steam Generator		47,500 lbs	50,000 lbs.	47,800 lbs.	50,300 lbs.
FW pump skid					
length		103 in.	103 in.	103 in.	103 in.
width		32 in.	32 in.	32 in.	32 in.
height		35 in.	35 in.	35 in.	35 in.
Shipping weight - FW Pump Skid		3,200 lbs.	3,200 lbs.	3,200 lbs.	3,200 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) Main FW pump HP depends on type of pump used. Oil fired units use a separate motor driven fuel oil pump - 1 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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