

Specifications

*Advanced Steam Boiler Technology
that is Safe, Efficient and Reliable*

CLAYTON FLUID HEATERS 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 E1004-DZ FLUID HEATER 1,000 BHP



Clayton
INNOVATIVE STEAM SOLUTIONS

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SPECIFICATIONS

MODEL E1004

	MODEL E1004 Standard		MODEL SE1004 with Super Economizer		MODEL E1004-FGR with Flue Gas Recirculation			MODEL SE1004-FGR with Flue Gas Recirculation and Super Economizer		
	1000		1000		1000			1000		
BOILER HORSEPOWER										
HEAT INPUT, BTU/hr.	Oil	40,331,325	38,924,419		40,331,325			38,924,419		
	Gas	40,823,171	39,382,353		40,823,171			39,382,353		
NET HEAT OUTPUT, BTU/hr.	33,475,000									
EQUIVALENT OUTPUT (from and at 212°F feedwater and 0 PSIG steam)	34,500 lb/hr.									
DESIGN PRESSURE (see note 1)	65 - 500 psig									
STEAM OPERATING PRESSURE (determined by design pressure)	60 - 450 psig									
OIL CONSUMPTION	286.9 gph									
at maximum steam output (see note 2)	276.8 gph									
GAS CONSUMPTION	40,823 cfm									
at maximum steam output (see note 3)	39,382 cfm									
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	75	125	75	125	75	125	10	75	125	10
design pressure 301-500 psig	75	150	75	150	75	150	10	75	150	10
ELECTRIC FLA, based on 460 V (see note 5)										
design pressure 15-300 psig	292		292		306			306		
design pressure 301-500 psig	322		322		336			336		
GAS SUPPLY PRESSURE REQUIRED	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									
WATER SUPPLY REQUIRED	5,300 gph									
HEATING SURFACE	2,890 sq.ft.									
EXHAUST STACK DIAMETER, o.d.	43.75 in.									
APPROXIMATE OVERALL DIMENSIONS										
Steam Generator										
length	183 in.		183 in.		183 in.			183 in.		
width	115 in.		115 in.		115 in.			115 in.		
height	206 in.		248 in.		228 in.			270 in.		
installed weight- wet	66,500 lbs		72,934 lbs		66,500 lbs			72,934 lbs		
shipping weight	47,500 lbs		52,126 lbs		47,500 lbs			52,126 lbs		
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.³

4) Main FW Pump HP depends on type of pump used - Oil fired units also use a separate motor driven fuel oil pump - 3/4 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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