

# 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 E154-DZ FLUID HEATER 150 BHP*



**Clayton**  
INNOVATIVE STEAM SOLUTIONS

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# SPECIFICATIONS

## MODEL E154

		MODEL E154 Standard	MODEL SE154 with Super Economizer	MODEL E154-FGR with Flue Gas Recirculation	MODEL SE154-FGR with Flue Gas Recirculation and Super Economizer
<b>BOILER HORSEPOWER</b>		150	150	150	150
<b>HEAT INPUT, BTU/hr</b>	Oil	6,049,699	5,838,663	6,049,699	5,838,663
	Gas	6,123,476	5,907,353	6,123,476	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</b> (from and at 212°F feedwater and 0 PSIG steam)		5,175 lbs/hr	5,175 lbs/hr	5,175 lbs/hr	5,175 lbs/hr
<b>DESIGN PRESSURE</b> (see note 1)		15 - 500 psig	15 - 500 psig	15 - 500 psig	15 - 500 psig
<b>STEAM OPERATING PRESSURE</b> (determined by design pressure)		13 - 450 psig	13 - 450 psig	13 - 450 psig	13 - 450 psig
<b>OIL CONSUMPTION</b>		43.0 gph	41.5 gph	43.0 gph	41.5 gph
at maximum steam output (see note 2)					
<b>GAS CONSUMPTION</b>		6,123 cfh	5,907 cfh	6,123 cfh	5,907 cfh
at maximum steam output (see note 3)					
<b>BURNER CONTROLS</b>					
modulating		5 to 1 Turndown	5 to 1 Turndown	4 to 1 Turndown	4 to 1 Turndown
<b>EFFICIENCY</b>					
oil-fired efficiency %		83%	86%	83%	86%
gas-fired efficiency %		82%	85%	82%	85%
<b>ELECTRIC MOTORS, HP</b> (see note 4)		Blower   Pump	Blower   Pump	Blower   Pump   Cooling	Blower   Pump   Cooling
design pressure 15-300 psig		7.5   5	7.5   5	7.5   5   5	7.5   5   5
design pressure 301-500 psig		7.5   7.5	7.5   7.5	7.5   7.5   5	7.5   7.5   5
<b>ELECTRIC FLA, based on 460 V</b> (see note 5)					
design pressure 15-300 psig		24	24	32	32
design pressure 301-500 psig		28	28	35	35
<b>GAS SUPPLY PRESSURE REQUIRED</b>		5 to 10 psig	5 to 10 psig	5 to 10 psig	5 to 10 psig
<b>ATOMIZING AIR REQUIRED</b> (see note 6)					
Capacity		25 scfm	25 scfm	25 scfm	25 scfm
Minimum pressure		70 psig	70 psig	70 psig	70 psig
<b>AIR SUPPLY REQUIRED</b> (FMB - see note 7)		N/A	N/A	N/A	N/A
<b>WATER SUPPLY REQUIRED</b>		795 gph	795 gph	795 gph	795 gph
<b>HEATING SURFACE</b>		473 sq.ft.	610 sq. ft.	473 sq.ft.	610 sq. ft.
<b>EXHAUST STACK CONNECTION, o.d.</b>		18 in.	18 in.	18 in.	18 in.
<b>APPROXIMATE OVERALL DIMENSIONS</b>					
length		114 in.	114 in.	140 in.	140 in.
width		93 in.	93 in.	113 in.	113 in.
height		102 in.	121 in.	126 in.	145 in.
<b>WEIGHT</b>					
installed - wet		8,407 lbs	9,611 lbs	8,607 lbs	9,811 lbs
shipping		7,390 lbs	8,360 lbs	7,590 lbs	8,560 lbs
FW pump skid		850 lbs	850 lbs	850 lbs	850 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) Oil fired units also use a separate motor driven fuel oil pump - 1/3 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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