

# 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 E354-DZ FLUID HEATER 350 BHP*



**Clayton**  
INNOVATIVE STEAM SOLUTIONS

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# SPECIFICATIONS

## MODEL E354

	MODEL E354 Standard	MODEL SE354 with Super Economizer	MODEL EG354-FMB with Low NOx Burner	MODEL SEG354-FMB with Low NOx Burner and Super Economizer
<b>BOILER HORSEPOWER</b>	350	350	350	350
<b>HEAT INPUT, BTU/hr</b>				
Oil	14,115,964	13,623,547	NA	NA
Gas	14,288,110	13,783,824	14,464,506	13,783,824
<b>NET HEAT OUTPUT, BTU/hr</b>	11,716,250	11,716,250	11,716,250	11,716,250
<b>EQUIVALENT OUTPUT (from and at 212°F feedwater and 0 PSIG steam)</b>	12,075 lbs/hr	12,075 lbs/hr	12,075 lbs/hr	12,075 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>	100.4 gph	96.9 gph	N/A	N/A
<b>GAS CONSUMPTION at maximum steam output (see note 3)</b>	14,288 cfm	13,784 cfm	14,465 cfm	13,784 cfm
<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%	NA	NA
gas-fired efficiency %	82%	85%	81%	85%
<b>ELECTRIC MOTORS, HP (see note 4)</b>	Blower   Pump	Blower   Pump	Blower   Pump   Cooling	Blower   Pump   Cooling
design pressure 15-300 psig	25   15	25   15	30   15   5	30   15   5
design pressure 301-500 psig	25   20	25   20	30   20   5	30   20   5
<b>ELECTRIC FLA, based on 460 V (see note 5)</b>				
design pressure 15-300 psig	67	67	89	89
design pressure 301-500 psig	74	74	95	95
<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 (see note 6)</b>				
Capacity	25 scfm	25 scfm	NA	NA
Minimum pressure	70 psig	70 psig	NA	NA
<b>AIR SUPPLY REQUIRED (FMB -see note 7)</b>	N/A	N/A	5 scfm @ 3 to 150 psig	5 scfm @ 3 to 150 psig
<b>WATER SUPPLY REQUIRED</b>	1,855 gph	1,855 gph	1,855 gph	1,855 gph
<b>HEATING SURFACE</b>	594 sq.ft.	796 sq.ft.	594 sq.ft.	796 sq.ft.
<b>EXHAUST STACK CONNECTION, o.d.</b>	24 in.	24 in.	24 in.	24 in.
<b>APPROXIMATE OVERALL DIMENSIONS</b>				
length	114 in.	114 in.	160 in.	160 in.
width	104 in.	104 in.	116 in.	116 in.
height	114 in.	137 in.	121 in.	144 in.
<b>WEIGHT</b>				
installed - wet	10,566 lbs	12,297 lbs	10,766 lbs	12,497 lbs
shipping	9,140 lbs	10,530 lbs	9,340 lbs	10,730 lbs
FW pump skid	1,150 lbs	1,150 lbs	1,150 lbs	1,150 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 - 1/2 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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