

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 E354-FGR with Flue Gas Recirculation	MODEL SE354-FGR with Flue Gas Recirculation and Super Economizer
BOILER HORSEPOWER	350	350	350	350
HEAT INPUT, BTU/hr				
Oil	14,115,964	13,623,547	14,115,964	13,623,547
Gas	14,288,110	13,783,824	14,288,110	13,783,824
NET HEAT OUTPUT, BTU/hr	11,716,250	11,716,250	11,716,250	11,716,250
EQUIVALENT OUTPUT (from and at 212°F feedwater and 0 PSIG steam)	12,075 lbs/hr	12,075 lbs/hr	12,075 lbs/hr	12,075 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)	100.4 gph	96.9 gph	100.4 gph	96.9 gph
GAS CONSUMPTION at maximum steam output (see note 3)	14,288 cfm	13,784 cfm	14,288 cfm	13,784 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	25 15	25 15	25 15 5	25 15 5
design pressure 301-500 psig	25 20	25 20	25 20 5	25 20 5
ELECTRIC FLA, based on 460 V (see note 5)				
design pressure 15-300 psig	67	67	75	75
design pressure 301-500 psig	74	74	82	82
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	25 scfm	25 scfm	25 scfm	25 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	1,855 gph	1,855 gph	1,855 gph	1,855 gph
HEATING SURFACE	594 sq.ft.	796 sq.ft.	594 sq.ft.	796 sq.ft.
EXHAUST STACK DIAMETER, o.d.	23.88 in.	23.88 in.	23.88 in.	23.88 in.
APPROXIMATE OVERALL DIMENSIONS				
length	114 in.	114 in.	160	160
width	104 in.	104 in.	116	116
height	114 in.	137 in.	138	161
WEIGHT				
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.³

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.



World Headquarters
17477 Hurley Street
City of Industry, CA 91744
800.423.4585 tel • 626.435.0180 fax
email: sales@claytonindustries.com
www.claytonindustries.com

**Europe, Africa &
Middle East Headquarters**
Rijksweg 30 • B-2880 Bornem, Belgium
32.3.890.5700 tel • 32.3.890.5701 fax
email: sales@clayton.be

Latin America Headquarters
Manuel L. Stampa 54 • Nueva Industrial Vallejo
Mexico D.F., 07700 Mexico
Toll Free: 01.800.888.4422 • (55)55.86.51.00 tel
(55)55.86.23.00 fax • email: claytonmexico@clayton.com.mx
www.claytonmexico.com.mx

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Clayton Deutschland GmbH
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