

# TECHNICAL SPECIFICATIONS

## CLAYTON STEAM GENERATORS:

- \* **SAVE FUEL**  
*The unique counter flow, controlled flow design provides higher fuel to steam efficiencies than traditional boilers.*
- \* **ARE SAFE FOR PERSONNEL & EQUIPMENT**  
*The Clayton units inherently eliminate the potential for hazardous steam explosions due to their smaller physical size and low water volume.*
- \* **PROVIDE RAPID RESPONSE**  
*With low water volume and physical size, Clayton units can respond very quickly to load changes*
- \* **PROVIDE FAST START-UP AND LOAD RESPONSE**  
*The units will provide full output from a cold start within ten minutes, without thermal stress.*
- \* **ARE COMPACT AND LIGHTWEIGHT**  
*The Clayton design typically occupies one-third of the floor space and is 75% lighter than a conventional boiler.*
- \* **ENSURE HIGH QUALITY STEAM**  
*Provide greater than 99.5% quality steam.*
- \* **AFFORD FUEL VERSATILITY**  
*Natural gas, propane, light or heavy oil burners are available or in combination.*
- \* **HAVE ADVANCED CONTROLS**  
*Programmable Logic Controllers (PLC) are standard for accurate and reliable operation.*
- \* **ARE AVAILABLE WITH LOW NOx**  
*Industry leading Low NOx burners are available to meet strict environmental regulations.*
- **ARE BACKED BY** *Fast, Expert Factory-Direct service that is available 24 hours per day throughout the U.S., Canada, Mexico, Europe, Asia and service distributors worldwide.*



MODEL E354  
STEAM GENERATOR  
350 BHP

# CLAYTON STEAM GENERATOR

# 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 cfh	13,784 cfh	14,465 cfh	13,784 cfh
<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</b>				
design pressure 15-300 psig	Blower 25   Pump 15	Blower 25   Pump 15	Blower 40   Pump 15   Cooling 5	Blower 40   Pump 15   Cooling 5
design pressure 301-500 psig	Blower 25   Pump 20	Blower 25   Pump 20	Blower 40   Pump 20   Cooling 5	Blower 40   Pump 20   Cooling 5
<b>ELECTRIC FLA, based on 460 V (see note 4)</b>				
design pressure 15-300 psig	67	67	89	89
design pressure 301-500 psig	75	75	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 5)</b>				
Capacity	25 scfm	25 scfm	NA	NA
Minimum pressure	70 psig	70 psig	NA	NA
<b>AIR SUPPLY REQUIRED (FMB -see note 6)</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 DIAMETER, o.d.</b>	23.88 in.	23.88 in.	23.88 in.	23.88 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) 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.

5) Atomizing air required for oil burner.

6) 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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