

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 E404
STEAM GENERATOR
400 BHP

CLAYTON STEAM GENERATOR

SPECIFICATIONS

MODEL E404

		MODEL E404 Standard	MODEL SE404 with Super Economizer	MODEL EG404-FMB with Low NOx Burner	MODEL SEG404-FMB with Low NOx Burner and Super Economizer
BOILER HORSEPOWER		400	400	400	400
HEAT INPUT, BTU/hr	Oil	16,132,530	15,569,767	NA	NA
	Gas	16,329,268	15,752,941	16,530,864	15,752,941
NET HEAT OUTPUT, BTU/hr		13,390,000	13,390,000	13,390,000	13,390,000
EQUIVALENT OUTPUT (from and at 212°F feedwater and 0 PSIG steam)		13,800 lbs/hr	13,800 lbs/hr	13,800 lbs/hr	13,800 lbs/hr
DESIGN PRESSURE (see note 1)		65 - 500 PSIG	65 - 500 PSIG	65 - 500 PSIG	65 - 500 PSIG
STEAM OPERATING PRESSURE (determined by design pressure)		60 - 450 PSIG	60 - 450 PSIG	60 - 450 PSIG	60 - 450 PSIG
OIL CONSUMPTION at maximum steam output (see note 2)		114.7 gph	110.7 gph	N/A	N/A
GAS CONSUMPTION at maximum steam output (see note 3)		16,329 cfh	15,753 cfh	16,531 cfh	15,753 cfh
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%	NA	NA
gas-fired efficiency %		82%	85%	81%	85%
ELECTRIC MOTORS, HP					
design pressure 15-300 psig	Blower Pump	25 15	25 15	40 15 7.5	40 15 7.5
design pressure 301-500 psig		25 20	25 20	40 20 7.5	40 20 7.5
ELECTRIC FLA, based on 460 V (see note 4)					
design pressure 15-300 psig		58	58	92	92
design pressure 301-500 psig		79	79	97	97
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 5)					
Capacity		30 scfm	30 scfm	NA	NA
Minimum pressure		70 psig	70 psig	NA	NA
AIR SUPPLY REQUIRED (FMB-see note 6)		N/A	N/A	5 scfm @ 3 to 150 psig	5 scfm @ 3 to 150 psig
WATER SUPPLY REQUIRED		2,120 gph	2,120 gph	2,120 gph	2,120 gph
HEATING SURFACE		912 sq.ft.	1,207 sq.ft.	912 sq.ft.	1,207 sq.ft.
EXHAUST STACK DIAMETER, o.d.		31.75 in.	31.75 in.	31.75 in.	31.75 in.
APPROXIMATE OVERALL DIMENSIONS					
length		133 in.	133 in.	156 in.	156 in.
width		131 in.	131 in.	142 in.	142 in.
height		131 in.	157 in.	135 in.	161 in.
WEIGHT					
installed - wet		17,268 lbs	20,250 lbs	17,568 lbs	20,550 lbs
shipping		14,650 lbs	17,040 lbs	14,950 lbs	17,340 lbs
FW pump skid		1,970 lbs	1,970 lbs	1,970 lbs	1,970 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) 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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