

Technical Specifications

The Next Generation of Clayton Steam Generators

Available in the following configurations:

- Standard configuration for most installations.
- Super Economizer (SE) for increased efficiency.
- Step-fired burners, High/Off
- Fuel Options: Natural Gas, Propane, #2 Fuel Oil, Biogas and Hydrogen.



The *SigmaFire*:

- **SAVES FUEL**
The unique counter flow design provides higher fuel-to-steam efficiency than traditional boilers.
- **IS SAFE FOR PERSONNEL AND EQUIPMENT**
Inherently safe, the Clayton design eliminates hazardous steam explosions.
- **PROVIDES RAPID RESPONSE**
The Clayton design responds rapidly to sudden or fluctuating load demands.
- **STARTS FAST**
The Clayton design will provide full output from a cold start within five minutes, without thermal stress.
- **IS COMPACT AND LIGHTWEIGHT**
The Clayton design typically occupies one-third of the floor space and weighs 75% less than a traditional boiler.
- **ENSURES HIGH QUALITY STEAM**
Clayton offers a 99.5% quality separator to minimize moisture in the steam.
- **OFFERS ADVANCED CONTROLS**
Digital controllers and a linkage-less servo controlled burner management system is available.
- **INCLUDES OUTSTANDING SUPPORT**
Every Steam Generator is backed by Clayton factory direct sales and service plus full service feedwater treatment.



SigmaFire 25 & 35 BHP
Steam Generator

CLAYTON STEAM GENERATOR

SPECIFICATIONS

MODEL SF25 / SF35		MODEL SF25 Standard	MODEL SF25-SE with Super Economizer	MODEL SF35 Standard	MODEL SF35-SE with Super Economizer
BOILER HORSEPOWER		25	25	35	35
HEAT INPUT, BTU/hr	Oil	1,008,283	973,110	1,411,596	1,362,355
	Gas	1,020,579	984,559	1,428,811	1,378,382
NET HEAT OUTPUT, BTU/hr		836,875	836,875	1,171,625	1,171,625
EQUIVALENT OUTPUT (from and at 212°F feedwater and 0 PSIG steam)		863 lbs/hr	863 lbs/hr	1,208 lbs/hr	1,208 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		7.2 gph	6.9 gph	10.0 gph	9.7 gph
at maximum steam output (see note 2)					
GAS CONSUMPTION		1,021 cfh	985 cfh	1,429 cfh	1,378 cfh
at maximum steam output (see note 3)					
BURNER CONTROLS		On/Off	On/Off	On/Off	On/Off
EFFICIENCY					
oil-fired efficiency %		83%	86%	83%	86%
gas-fired efficiency %		82%	85%	82%	85%
ELECTRIC MOTORS, HP		Blower Pump	Blower Pump	Blower Pump	Blower Pump
design pressure 15-300 psig		2 1	2 1	3 1.5	3 1.5
design pressure 301-500 psig		2 1.5	2 1.5	3 2	3 2
ELECTRIC FLA, based on 460 V (see note 4)					
design pressure 15-300 psig		6.0	6.0	8.5	8.5
design pressure 301-500 psig		6.8	6.8	8.6	8.6
GAS SUPPLY PRESSURE REQUIRED		2 psig	2 psig	2 psig	2 psig
WATER SUPPLY REQUIRED		135 gph	135 gph	189 gph	189 gph
HEATING SURFACE		88.7 sq.ft.	118.6 sq.ft.	118.6 sq.ft.	148.5 sq.ft.
EXHAUST STACK DIAMETER, o.d.		7.88 in.	7.88 in.	9.88 in.	9.88 in.
APPROXIMATE OVERALL DIMENSIONS					
length		58 in.	58 in.	58 in.	58 in.
width		56 in.	56 in.	56 in.	56 in.
height		71 in.	83 in.	83 in.	94 in.
WEIGHT					
installed - wet		2,012 lbs	2,187 lbs	2,187 lbs	2,362 lbs
shipping		1,920 lbs	2,070 lbs	2,070 lbs	2,220 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.

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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