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 E304-DZ FLUID HEATER 300 BHP

Clayton
INNOVATIVE STEAM SOLUTIONS

SAVES FUEL * SAVES SPACE * SAVES TIME * SAVES MONEY

SPECIFICATIONS

MODEL E304

	MODEL E304 Standard	MODEL SE304 with Super Economizer	MODEL EG304-FMB with Low NOx Burner	MODEL SE304-FMB with Low NOx Burner and Super Economizer
BOILER HORSEPOWER	300	300	300	300
HEAT INPUT, BTU/hr Oil	12,099,398	11,677,326	NA	NA
Gas	12,246,951	11,814,706	12,398,148	11,814,706
NET HEAT OUTPUT, BTU/hr	10,042,500	10,042,500	10,042,500	10,042,500
EQUIVALENT OUTPUT (from and at 212°F feedwater and 0 PSIG steam)	10,350 lbs/hr	10,350 lbs/hr	10,350 lbs/hr	10,350 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)	86.1 gph	83.1 gph	N/A	N/A
GAS CONSUMPTION at maximum steam output (see note 3)	12,247 cfh	11,815 cfh	12,398 cfh	11,815 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	Blower / Pump	Blower / Pump	Blower / Pump / Cooling	Blower / Pump / Cooling
design pressure 15-300 psig	15 / 10	15 / 10	30 / 10 / 5	30 / 10 / 5
design pressure 301-500 psig	15 / 15	15 / 15	30 / 15 / 5	30 / 15 / 5
ELECTRIC FLA, based on 460 V (see note 4)				
design pressure 15-300 psig	44	44	75	75
design pressure 301-500 psig	51	51	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 5)				
Capacity	25 scfm	25 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	1,590 gph	1,590 gph	1,590 gph	1,590 gph
HEATING SURFACE	594 sq.ft.	796 sq.ft.	594 sq.ft.	796 sq.ft.
EXHAUST STACK CONNECTION, o.d.	24 in.	24 in.	24 in.	24 in.
APPROXIMATE OVERALL DIMENSIONS				
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.
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) 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.

Clayton
INNOVATIVE STEAM SOLUTIONS

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
Clayton Thermal Products Ltd (UK)
Clayton Scandinavia A.S.
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Clayton de France S.A.R.L.
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World Leaders in Precision Steam Generators, Fluid Heaters, Heat Recovery Systems and Customer Service