TECHNICAL SPECIFICATIONS

CLAYTON HIGH TEMPERATURE FLUID HEATERS:

* ***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 REPONSE***
  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.***

Clayton
INNOVATIVE STEAM SOLUTIONS

MODEL E1004-DZ
FLUID HEATER
1000 BHP

CLAYTON FLUID HEATER

SPECIFICATIONS

MODEL E1004

	MODEL E1004 Standard	MODEL SE1004 with Super Economizer	MODEL EG1004-FMB with Low NOx Burner	MODEL SEG1004-FMB with Low NOx Burner and Super Economizer
BOILER HORSEPOWER	1000	1000	1000	1000
HEAT INPUT, BTU/hr. Oil	40,331,325	38,924,419	NA	NA
Gas	40,823,171	39,382,353	41,327,160	39,382,353
NET HEAT OUTPUT, BTU/hr.	33,475,000	33,475,000	33,475,000	33,475,000
EQUIVALENT OUTPUT (from and at 212°F feedwater and 0 PSIG steam)	34,500 lb/hr.	34,500 lb/hr.	34,500 lb/hr.	34,500 lb/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)	286.9 gph	276.8 gph	N/A	N/A
GAS CONSUMPTION at maximum steam output (see note 3)	40,823 cfh	39,382 cfh	41,327 cfh	39,382 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	75 / 100	100 / 100	100 / 100 / 7.5	100 / 100 / 7.5
design pressure 301-500 psig	75 / 125	100 / 125	100 / 125 / 7.5	100 / 125 / 7.5
ELECTRIC FLA, based on 460 V (see note 4)				
design pressure 15-300 psig	252	280	290	290
design pressure 301-500 psig	280	313	333	333
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	N/A	N/A
Minimum pressure	70 psig	70 psig	N/A	N/A
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	5,300 gph	5,300 gph	5,300 gph	5,300 gph
HEATING SURFACE	2,890 sq.ft.	3,655 sq.ft.	2,890 sq.ft.	3,655 sq.ft.
EXHAUST STACK DIAMETER, o.d.	43.75 in.	43.75 in.	43.75 in.	43.75 in.
APPROXIMATE OVERALL DIMENSIONS				
Steam Generator				
length	183 in.	183 in.	206 in.	206 in.
width	115 in.	115 in.	115 in.	115 in.
height	206 in.	248 in.	206 in.	206 in.
installed weight- wet	66,500 lbs	72,934 lbs	66,800 lbs	73,234 lbs
shipping weight	47,500 lbs	52,126 lbs	47,800 lbs	52,426 lbs
Pump Skid				
length	103 in.	103 in.	103 in.	103 in.
width	32 in.	32 in.	32 in.	32 in.
height	35 in.	35 in.	35 in.	35 in.
shipping weight - FW pump skid	3,200 lbs	3,200 lbs	3,200 lbs	3,200 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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INNOVATIVE STEAM SOLUTIONS

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Clayton Scandinavia A.S.
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Clayton de France S.A.R.L.
Clayton Sales & Service Canada

World Leaders in Precision Steam Generators, Fluid Heaters, Heat Recovery Systems and Customer Service