

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 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-DZ
FLUID HEATER
400 BHP

CLAYTON FLUID HEATER

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	16,132,530	15,569,767	NA	NA
Oil	16,329,268	15,752,941	16,530,864	15,752,941
Gas	13,390,000	13,390,000	13,390,000	13,390,000
NET HEAT OUTPUT, BTU/hr	13,800 lbs/hr	13,800 lbs/hr	13,800 lbs/hr	13,800 lbs/hr
EQUIVALENT OUTPUT (from and at 212°F feedwater and 0 PSIG steam)	65 - 500 PSIG	65 - 500 PSIG	65 - 500 PSIG	65 - 500 PSIG
DESIGN PRESSURE (see note 1)	60 - 450 PSIG	60 - 450 PSIG	60 - 450 PSIG	60 - 450 PSIG
STEAM OPERATING PRESSURE (determined by design pressure)	114.7 gph	110.7 gph	N/A	N/A
OIL CONSUMPTION at maximum steam output (see note 2)	16,329 cfh	15,753 cfh	16,531 cfh	15,753 cfh
GAS CONSUMPTION at maximum steam output (see note 3)	5 to 1 Turndown	5 to 1 Turndown	4 to 1 Turndown	4 to 1 Turndown
BURNER CONTROLS modulating	83%	86%	NA	NA
EFFICIENCY oil-fired efficiency %	82%	85%	81%	85%
gas-fired efficiency %	Blower Pump	Blower Pump	Blower Pump Cooling	Blower Pump Cooling
ELECTRIC MOTORS, HP design pressure 15-300 psig	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)	58	58	92	92
design pressure 15-300 psig	79	79	97	97
design pressure 301-500 psig	5 to 10 psig	5 to 10 psig	5 to 10 psig	5 to 10 psig
GAS SUPPLY PRESSURE REQUIRED	30 scfm	30 scfm	NA	NA
ATOMIZING AIR REQUIRED (see note 5)	70 psig	70 psig	NA	NA
Capacity	N/A	N/A	5 scfm @ 3 to 150 psig	5 scfm @ 3 to 150 psig
Minimum pressure	2,120 gph	2,120 gph	2,120 gph	2,120 gph
AIR SUPPLY REQUIRED (FMB-see note 6)	912 sq.ft.	1,207 sq.ft.	912 sq.ft.	1,207 sq.ft.
WATER SUPPLY REQUIRED	31.75 in.	31.75 in.	31.75 in.	31.75 in.
HEATING SURFACE	133 in.	133 in.	156 in.	156 in.
EXHAUST STACK DIAMETER, o.d.	131 in.	131 in.	142 in.	142 in.
APPROXIMATE OVERALL DIMENSIONS	131 in.	157 in.	135 in.	161 in.
length	17,268 lbs	20,250 lbs	17,568 lbs	20,550 lbs
width	14,650 lbs	17,040 lbs	14,950 lbs	17,340 lbs
height	1,970 lbs	1,970 lbs	1,970 lbs	1,970 lbs
WEIGHT installed - wet				
shipping				
FW pump skid				

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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