

# 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 E154-DZ  
FLUID HEATER  
150 BHP

# CLAYTON FLUID HEATER

# SPECIFICATIONS

## MODEL E154

	MODEL E154 Standard	MODEL SE154 with Super Economizer	MODEL EG154-FMB with Low NOx FMB Burner	MODEL SEG154-FMB with Low NOx FMB Burner and Super Economizer
BOILER HORSEPOWER	150	150	150	150
HEAT INPUT, BTU/hr	Oil 6,049,699	5,838,663	NA	NA
	Gas 6,123,476	5,907,353	6,199,074	5,907,353
NET HEAT OUTPUT, BTU/hr	5,021,250	5,021,250	5,021,250	5,021,250
EQUIVALENT OUTPUT (from and at 212°F feedwater and 0 PSIG steam)	5,175 lbs/hr	5,175 lbs/hr	5,175 lbs/hr	5,175 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)	43.0 gph	41.5 gph	N/A	N/A
GAS CONSUMPTION at maximum steam output (see note 3)	6,123 cfh	5,907 cfh	6,199 cfh	5,907 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	7.5   5	7.5   5	15   5   5	15   5   5
design pressure 301-500 psig	7.5   7.5	7.5   7.5	15   7.5   5	15   7.5   5
ELECTRIC FLA, based on 460 V (see note 4)				
design pressure 15-300 psig	25	25	35	35
design pressure 301-500 psig	28	28	37	37
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	795 gph	795 gph	795 gph	795 gph
HEATING SURFACE	473 sq.ft.	610 sq. ft.	473 sq.ft.	610 sq. ft.
EXHAUST STACK DIAMETER, o.d.	17.88 in.	17.88 in.	17.88 in.	17.88 in.
APPROXIMATE OVERALL DIMENSIONS				
length	114 in.	114 in.	140 in.	140 in.
width	93 in.	93 in.	113 in.	113 in.
height	102 in.	121 in.	107 in.	124 in.
WEIGHT				
installed - wet	8,407 lbs	9,611 lbs	8,607 lbs	9,811 lbs
shipping	7,390 lbs	8,360 lbs	7,590 lbs	8,560 lbs
FW pump skid	850 lbs	850 lbs	850 lbs	850 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.<sup>3</sup>

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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