

# TECHNICAL SPECIFICATIONS

## CLAYTON STEAM GENERATORS

### SAVES FUEL

The unique counter flow design provides higher fuel-to-steam efficiency than traditional boilers.

### SAFE

The Clayton design eliminates any possibility of a steam explosion.

### RAPID RESPONSE

The Clayton design responds rapidly to sudden or fluctuating load demands.

### FAST START

cold start within five to ten minutes, without thermal stress.

### COMPACT AND LIGHTWEIGHT

The Clayton design typically occupies one-third of the floor space and is 75% lighter than a traditional boiler.

### HIGH-QUALITY STEAM

Clayton provides a 99.5% quality steam separator to minimize moisture and carryover.

### FUEL VERSATILITY

Natural gas, propane, biofuels, light oil and heavy oil burners available singularly or in combination.

### ADVANCED CONTROLS

Most units are equipped with a Programmable Logic Controller (PLC) for accurate and reliable operation.

### LOW NO<sub>x</sub>

Industry-leading Low NO<sub>x</sub> burners are available for added environmental protection.

### FACTORY SERVICE

Expert service is available 24 hours a day direct from factory in the U.S., Canada, Mexico, Europe and Asia; and worldwide through our service distributors.

## STEAM MASTER CSM-40



CLAYTON  
STEAM MASTER

Clayton  
SigmaFire™

CLAYTON E-SERIES

 **Clayton**  
INNOVATIVE STEAM SOLUTIONS

SAVES FUEL | SAVES SPACE | SAVES TIME | SAVES MONEY

# TECHNICAL SPECIFICATIONS

Advanced Steam Boiler Technology that is Safe, Efficient and Reliable

MODEL CSM40	MODEL CSM-40 Standard	MODEL CSM-40 with Super Economizer
<b>BOILER HORSEPOWER</b>	40	40
<b>HEAT INPUT, BTU/hr</b>		
Oil	1,594,048	1,521,591
Gas	1,653,086	1,575,294
<b>NET HEAT OUTPUT, BTU/hr</b>	1,339,000	1,339,000
<b>EQUIVALENT OUTPUT (from and at 212°F feedwater and 0 PSIG steam)</b>	1,380 lbs/hr	1,380 lbs/hr
<b>DESIGN PRESSURE (see note 1)</b>	150 psig	150 psig
<b>STEAM OPERATING PRESSURE</b>	65-125 psig	65-125 psig
<b>OIL CONSUMPTION</b>	11.3 gph	10.8 gph
at maximum steam output (see note 2)		
<b>GAS CONSUMPTION</b>	1,653 cfh	1,575 cfh
at maximum steam output (see note 3)		
<b>BURNER CONTROLS</b>		
step-fired (oil)	100% / 50% / Off	100% / 50% / Off
modulating (gas)	4 to 1 Turndown	4 to 1 Turndown
<b>EFFICIENCY</b>		
oil-fired efficiency %	84%	88%
gas-fired efficiency %	81%	85%
<b>ELECTRIC MOTORS, HP (see note 4)</b>		
design pressure 150 psig	Blower   Pump 0.83   1.5	Blower   Pump 0.83   1.5
<b>ELECTRIC FLA, based on 230 V (see note 5)</b>	15	15
<b>GAS SUPPLY PRESSURE REQUIRED</b>	2 psig	2 psig
<b>WATER SUPPLY REQUIRED</b>	353 gph	353 gph
<b>HEATING SURFACE</b>	152.8 sq.ft.	228.2 sq.ft.
<b>EXHAUST STACK CONNECTION, o.d.</b>	10 in.	10 in.
<b>APPROXIMATE OVERALL DIMENSIONS</b>		
length	71 in.	71 in.
width	53 in.	53 in.
height	97 in.	97 in.
<b>WEIGHT</b>		
installed - wet	3,567 lbs	3,791 lbs
shipping	3,350 lbs	3,593 lbs

- 1) Design Pressure currently limited to 150 psig.
- 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) Oil fired units also use a separate motor driven fuel oil pump - 1/2 HP
- 5) Continuous running. 230Vac/1/60Hz power supply required.

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