TECHNICAL SPECIFICATIONS

CLAYTON STEAM GENERATORS:

* 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.





MODEL E604 STEAM GENERATOR 600 BHP

CLAYTON STEAM GENERATOR

SPECIFICATIONS

Standard With Super Economizer With Low NOx Burner and Super Economizer Standard With Super Economizer With Low NOx Burner and Super Economizer Standard Sta	MODEL E604								MODE	L SEG604-	FMB	
BOILER HORSEPOWER			MODEL E604		MODEL SE604		MODEL EG604-FMB			with Low NOx Burner		
HEAT INPUT, BTU/hr			Standard		with Super Economizer		with Low NOx Burner		and Super Economizer			
Sas 24,493,902 23,629,412 24,796,296 23,629,412 20,085,000 20,005,000	BOILER HORSEPOWER		600		600		600		600			
NET HEAT OUTPUT, BTU/hr EQUIVALENT OUTPUT (from and at 212°F feedwater and 0 PSIG steam) 20,085,000 2	HEAT INPUT, BTU/hr	Oil	24,198,795		23,354,651		NA					
EQUIVALENT OUTPUT (from and at 212°F feedwater and 0 PSIG steam) 20,700 lbs/hr 65 - 500 PSIG 60 - 450 PSIG 60 - 45	·	Gas	24,493,902		23,629,412		24,796,296		23,629,412			
Feedwater and 0 PSIG steam 20,700 lbs/hr 65 - 500 PSIG 60 - 450 PSIG	NET HEAT OUTPUT, BTU/hr		1 · · · · · · · · · · · · · · · · · · ·		-		20,085,000					
DESIGN PRESSURE (see noté 1) 65 - 500 PSIG 65 - 500 PSIG 60 - 450 PSIG	EQUIVALENT OUTPUT (from and at 212°F											
STEAM OPERATING PRESSURÉ (determined by design pressure) Oil CONSUMPTION 172.1 gph 166.1 gph NA			20,700 lbs/hr		20,700 lbs/hr		20,700 lbs/hr		20,700 lbs/hr			
(determined by design pressure) OIL CONSUMPTION 172.1 gph 166.1 gph NA NA NA NA At maximum steam output (see note 2) 24,494 cfh 23,629 cfh 24,796 cfh 24,796 cfh 23,629 cfh 24,796 cfh	DESIGN PRESSURE (see note 1)		65 - 500 PSIG		65 - 500 PSIG		65 - 500 PSIG		65 - 500 PSIG			
DIL CONSUMPTION at maximum steam output (see note 2) GAS CONSUMPTION at maximum steam output (see note 2) 24,494 cfh 23,629 cfh 24,796 cfh 24,796 cfh 23,629 cfh 24,796	, ,		60 - 450 PSIG		60 - 450 PSIG		60 - 450 PSIG		60 - 450 PSIG			
at maximum steam output (see note 2) GAS CONSUMPTION at maximum steam output (see note 3) BURNER CONTROLS modulating EFFICIENCY oil-fired efficiency % gas-fired efficiency % Blower Pump design pressure 15-300 psig design pressure 301-500 psig ELECTRIC FLA, based on 460 V (see note 4) design pressure 301-500 psig GAS SUPPLY PRESURE REQUIRED ATOMIZING AIR REQUIRED (see note 5) Capacity MATER SUPPLY REQUIRED (FMB -see note 6) WATER SUPPLY REQUIRED MATEM SURFACE 23,629 cfh 24,796 cfh 24,79c c												
GAS CONSUMPTION at maximum steam output (see note 3)			172.1 gph		166.1 gph		NA		NA			
at maximum steam output (see note 3) BURNER CONTROLS modulating EFFICIENCY oil-fired efficiency % gas-fired efficiency % letter CTRIC MOTORS, HP design pressure 15-300 psig design pressure 301-500 psig ELECTRIC FLA, based on 460 V (see note 4) design pressure 15-300 psig letter CTRIC FLA, based on 460 V (see note 4) design pressure 15-300 psig letter CTRIC FLA, based on 460 V (see note 4) design pressure 15-300 psig letter CTRIC FLA, based on 460 V (see note 5) Capacity Minimum pressure AIR SUPPLY PREQUIRED (see note 5) WATER SUPPLY REQUIRED (FMB -see note 6) WATER SUPPLY REQUIRED WATER SUPPLY REQUIRED 3,180 gph HEATING SURFACE 5 to 1 Turndown 5 to 1 Turndown 4 to 1 Turndown 85% Blower Pump Cooling Blower Pump Cooling Blower Pump Cooling 10 30 5 60 30 7.5			J.		· · Jr							
BURNER CONTROLS modulating EFFICIENCY oil-fired efficiency % gas-fired efficiency % gas-fired efficiency % Blower Pump design pressure 15-300 psig 40 30 40 30 60 30 7.5 60 30			24,49	4 cfh	23,629 cfh		24,796 cfh		23,629 cfh			
Modulating S to 1 Turndown										,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Best	BURNER CONTROLS	•										
Same			5 to 1 Tu	rndown	5 to 1 Tu	5 to 1 Turndown		4 to 1 Turndown		4 to 1 Turndown		
Sas-fired efficiency % Sas-fired efficienc	•											
ELECTRIC MOTORS, HP design pressure 15-300 psig 40 30 40 30 60 30 7.5 60 30 7 7 6 6 30 7 6 6 30 7 6 6 30 7 6 6 30 7 6 6 30 7 6 6 30 7 6 6 30 7 6 6 30 7 7 6 6 30 7 6 6 30 7 7 6 6 30 7 7 6 6 30 7 7 6 6 30 7 7 6 6 30 7 7 6 6 30 7 7 6 6 30 7 7 6 6 30 7 7 6 6 30 7 7 7 7 7 7 7 7 7	oil-fired efficiency %											
design pressure 15-300 psig 40 30 40 30 60 30 7.5 60 30 7 design pressure 301-500 psig 40 30 40 30 60 30 7.5 60 30 7 ELECTRIC FLA, based on 460 V (see note 4) 40 30 40 30 60 30 7.5 60 30 7 design pressure 15-300 psig 103 103 122	gas-fired efficiency %											
design pressure 15-300 psig 40 30 40 30 60 30 7.5 60 30 7 design pressure 301-500 psig 40 30 40 30 60 30 7.5 60 30 7 ELECTRIC FLA, based on 460 V (see note 4) 40 30 40 30 60 30 7.5 60 30 7 design pressure 15-300 psig 103 103 122	ELECTRIC MOTORS, HP		Blower	Pump	Blower	Pump	Blower	Pump	Cooling	Blower	Pump C	ooling
ELECTRIC FLA, based on 460 V (see note 4) design pressure 15-300 psig design pressure 301-500 psig GAS SUPPLY PRESSURE REQUIRED ATOMIZING AIR REQUIRED (see note 5) Capacity Minimum pressure AIR SUPPLY REQUIRED (FMB -see note 6) WATER SUPPLY REQUIRED 3,180 gph HEATING SURFACE 103 103 103 122 122 122 122 122 5 to 10 psig 5 to 10 psig 7 to 10 psig NA S scfm @ 3 to 150 psig 5 scfm @ 3 to 150 psig 3,180 gph 1,253 sq.ft. 1,548 sq.ft.	design pressure 15-300 psig		40	30	40	30	60	30				7.5
design pressure 15-300 psig 103 103 122 122 design pressure 301-500 psig 103 103 122 122 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) 30 scfm 30 scfm NA NA Alin Supply Required (FMB -see note 6) N/A N/A N/A N/A WATER SUPPLY REQUIRED 3,180 gph 3,180 gph 3,180 gph 3,180 gph HEATING SURFACE 1,253 sq.ft. 1,548 sq.ft. 1,253 sq.ft. 1,548 sq.ft.	design pressure 301-500 psig		40	30	40	30	60	30	7.5	60	30	7.5
design pressure 301-500 psig 103 103 122 122 GAS SUPPLY PRESSURE REQUIRED ATOMIZING AIR REQUIRED (see note 5) 5 to 10 psig 5 to 10 psig 5 to 10 psig Capacity Minimum pressure AIR SUPPLY REQUIRED (FMB -see note 6) 30 scfm 70 psig NA NA N/A N/A 5 scfm @ 3 to 150 psig NA NA 5 scfm @ 3 to 150 psig	ELECTRIC FLA, based on 460 V (see note 4)					•		•			
GAS SUPPLY PRESSURE REQUIRED ATOMIZING AIR REQUIRED (see note 5) Capacity Minimum pressure AIR SUPPLY REQUIRED (FMB -see note 6) WATER SUPPLY REQUIRED WATER SUPPLY REQUIRED To 10 psig 5 to 10 psig 5 to 10 psig 5 to 10 psig NA NA NA NA NA N/A N/A N/A S scfm @ 3 to 150 psig 5 scfm @ 3 to 150 psig 3,180 gph 1,253 sq.ft. 1,548 sq.ft. 1,548 sq.ft.	design pressure 15-300 psig		103		103		122		122			
ATOMIZING AIR REQUIRED (see note 5) Capacity Minimum pressure AIR SUPPLY REQUIRED (FMB -see note 6) WATER SUPPLY REQUIRED 30 scfm 70 psig 70 psig NA NA NA NA 5 scfm @ 3 to 150 psig 5 scfm @ 3 to 150 psig 3,180 gph 3,180 gph 1,253 sq.ft. 1,548 sq.ft. 1,548 sq.ft.	design pressure 301-500 psig		103		103		122			122		
Capacity 30 scfm 30 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 3,180 gph 3,180 gph 3,180 gph 3,180 gph HEATING SURFACE 1,253 sq.ft. 1,548 sq.ft. 1,253 sq.ft. 1,548 sq.ft.	GAS SUPPLY PRESSURE REQUIRED		5 to 10 psig		5 to 10 psig		5 to 10 psig			5 to 10 psig		
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 3,180 gph 3,180 gph 3,180 gph 3,180 gph HEATING SURFACE 1,253 sq.ft. 1,548 sq.ft. 1,253 sq.ft. 1,548 sq.ft.	ATOMIZING AIR REQUIRED (see	note 5)						•	_			
AIR SUPPLY REQUIRED (FMB -see note 6) N/A N/A 5 scfm @ 3 to 150 psig 3,180 gph 3,180 gph 3,180 gph 3,180 gph 3,180 gph 3,180 gph 1,548 sq.ft. 1,253 sq.ft. 1,548 sq.ft.	Capacity	-	30 scfm		30 scfm		NA		NA			
WATER SUPPLY REQUIRED 3,180 gph 3,180 gph 3,180 gph 3,180 gph 3,180 gph 1,253 sq.ft. 1,548 sq.ft. 1,253 sq.ft. 1,548 sq.ft.			70 psig		70 psig		NA		NA			
HEATING SURFACE 1,253 sq.ft. 1,548 sq.ft. 1,253 sq.ft. 1,548 sq.ft.	` ,		N/A		N/A		5 scfm @ 3 to 150 psig		5 scfm @ 3 to 150 psig			
			3,180 gph		3,180 gph		3,180 gph		3,180 gph			
EXHAUST STACK DIAMETER, o.d. 31.75 in. 31.75 in. 31.75 in. 31.75 in.	HEATING SURFACE				1,548 sq.ft.		1,253 sq.ft.					
	•		31.75 in.		31.75 in.		31.75 in.		31.75 in.			
APPROXIMATE OVERALL DIMENSIONS	APPROXIMATE OVERALL DIMEN	ISIONS										
length 133 in. 136 in. 156 in. 156 in.	length											
width 131 in. 131 in. 142 in. 142 in.	width		131 in.		131 in.				142 in.			
height 181 in. 207 in. 185 in. 211 in.	height		181 in.		207 in.		185 in.		211 in.			
WEIĞHT	WEIGHT									Ī		
installed - wet 21,448 lbs 27,230 lbs 21,748 lbs 27,530 lbs	-		21,448 lbs		27,230 lbs		21,748 lbs			27,530 lbs		
shipping 17,980 lbs 23,170 lbs 18,280 lbs 23,470 lbs			17,980 lbs		23,170 lbs		18,280 lbs			•		
FW pump skid 2,200 lbs 2,200 lbs 2,200 lbs 2,200 lbs			•		*		2,200 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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