Boiler Model

LX-150SGN-07

Boiler Output		
Description	-	Standard Pressure, Low NOx
Boiler Type	-	Multiple water tube, once through, forced flow, steam boiler
Boiler Capacity	BHP	150
Design Pressure	PSIG	170
Operating Pressure Range[1,2]	PSIG	70-150
Equivalent Output[3]	lb/hr	5180
Maximum Heat Output	MMBTU/hr	5.022
Boiler Heating Surface Area	ft^2	388
Turn-Down	-	3:1
Turn-Down	%	33.3%

Air and Fuel Requirements				
Fuel	-	Natural Gas	Propane	#2 Oil
Fuel Supply Pressure	PSIG	3-5	3-5	N/A
Heat Input	MMBTU/hr	5.908	5.908	N/A
Fuel-to-Steam Efficiency[4]	%	85.0%	85.0%	N/A
Flue Gas Excess Oxygen	%	7.0%	7.0%	N/A
Flue Gas Temperature[4]	°F	240	240	N/A
Fuel Consumption[5]	SCFH/GPH	5,790.0	64.6	N/A
Combustion Air Volume	SCFH	83,580	83,580	N/A
Flue Gas Volume - Wet	SCFH	89,370	89,370	N/A
Flue Gas Volume - Dry[6]	SCFH	77,370	77,370	N/A
Flue Gas Velocity	ft/s	15.7	15.7	N/A

Emissions[7]				
Fuel	-	Natural Gas	Propane	#2 Oil
NOx	ppm	9.0	12.0	N/A
NOx	lbs/MMBTU	0.0109	0.0146	N/A
CO	ppm	50.0	50.0	N/A
CO	lbs/MMBTU	0.0369	0.0369	N/A
CO2	lbs/MMBTU	117.6	136.6	N/A
VOC	lbs/MMBTU	0.0054	0.0054	N/A
TOC	lbs/MMBTU	0.0108	0.0109	N/A
SO2[8]	lbs/MMBTU	0.0006	0.0005	N/A
PMt	lbs/MMBTU	0.0075	0.0077	N/A
PMf	lbs/MMBTU	0.0019	0.0022	N/A
PMc	lbs/MMBTU	0.0056	0.0055	N/A

Weights & Capacities		
Shipping Weight	lbs	8,000
Operational Weight	lbs	8,800
Operational Water Content[9]	Gallons	72
Fully Flooded Water Content[10]	Gallons	200

Inlet & Outlet Connections		
Economizer Drain (If Equipped)	in NPT	2
Main Steam Outlet	NPT Flange	3 (150#)
Safety Valve Outlet[11]	in NPT	2-1/2
Drip Pan Elbow Vent	in NPT	4
Drip Pan Elbow Drain	in NPT	3/4
Feedwater Inlet	in NPT	1
Fuel Gas Inlet	in NPT	2
#2 Oil Inlet	in NPT	N/A
Automatic "Surface" Blowdown	in NPT	3/8
Bottom Blow-Off	in NPT	1
LVC Blow-Off	in NPT	1
Chimney Diameter	in OD	20

Electrical Ratings at 460V[12]				
Feedwater Configuration[13]	-	Std. Check Valve	MI Check Valve	No Pump
Electrical Rating	A	29.7	29.7	22.1
Min. Circuit Ampacity	A	35.0	35.0	28.0
Max. Circuit Protective Device[14]	A	45.0	45.0	40.0

Electrical Components & Controls		
Power Supply	-	575, 460, 380, 230 or 208 Volts, 3 Phase, 60 Hz
Blower Motor	HP	15
Water Pump Motor[15]	HP	5
Oil Pump Motor	HP	N/A
Combustion Control	-	3-Position Step Burner (High - Low - Off)
Combustion System	-	Forced Draft Burner
Ignition System	-	Electric Spark Ignited, Interrupted Gas Pilot
Flame Safeguard	-	Miura BL Microcontroller with Miura ZUV Flame Sensor
Low Water Protection	-	Primary and Secondary Low Water Cutoff Electrodes
Miura Online Maintenance (M.O.M)	-	Analog Phone Line or 3G Cellular, Optional

Notes
1) Operating within this range ensures proper steam quality and limited relief valve leakage.
2) Setpoint must be below the listed maximum operating pressure to accommodate overshoot. Contact your Miura representative to confirm operating pressure range for your specific application.
3) Equivalent output is calculated based on conversion of 212°F feedwater to 212°F steam.
4) Based on 68°F feedwater, 80°F combustion air, and minimum steam pressure. Feedwater temperature during normal operation must be ≥140°F. Efficiency decreases and flue gas temperature increases with increasing feedwater temperature and steam pressure. Contact your Miura representative to confirm values for your specific application.
5) Fuel consumption assumes 1,020 BTU/SCF for natural gas, 91,500 BTU/gal for LPG, and 140,000 BTU/gal for #2 oil.
6) Dry flue gas volume is corrected for the operating O_2 percentage and assumes F-factor of 8,710 SCF/MMBTU for natural gas/LPG and 9,190 SCF/MMBTU for #2 oil.
7) NOx and CO emissions are based on empirical test data corrected to 3% excess oxygen, all others are calculated using EPA factors.
8) SO_2 factor assumes 0.002 grains/SCF for natural gas, 0.005 grains/SCF for LPG, 15ppm for #2 oil.
9) Operational water content is the average water content during normal operation for the entire boiler assembly including economizer.
10) Fully flooded water content is the total water and steam capacity for the entire boiler assembly including economizer.
11) Boiler safety valve outlet size is subject to change based on specific operating pressure.
12) Convert to amps at a different voltage by multiplying value by the ratio of 460V/new voltage.
13) Multiple installation (MI) check valve is required with higher feedwater pressures (i.e. when using DA tank) and may require a larger pump.
14) For time-delay fuse protective device. Value will be larger for time-delay circuit breaker.
15) Water pump output may vary by feedwater piping options.