MIURA SUPER LX GAS/LOW NOx SERIES

High or Low Pressure Steam Boiler

Setting new standards in boiler technology

XJ1
Micro Computer
Boiler Control
System

MIURA provides the most reliable and economical steam

www.miuraboiler.com

BOILER
MIURA
...Setting New Standards in Boiler Technology

MIURA SUPER LX GAS/LOW NOx SERIES

Save on your gas bill!

FOOD SERVICE INDUSTRY

MIURA provides the most reliable and economical steam

High Pressure Steam Boiler

HIGHEST IN-SERVICE EFFICIENCIES IN THE INDUSTRIAL BOILER INDUSTRY

In today's business, nothing can be taken for granted, except that the world's natural resources are being consumed at an alarming rate. Fuel prices have risen dramatically over the last few years with future increases almost a certainty. The health of today's businesses will depend on how efficiently they can produce their product. The average fuel savings MIURA customers enjoy in steam production is about twenty percent over other boiler designs. At eleven percent fuel savings, MIURA can save about $100,000 per year of fuel for a typical 600 BHP steam system with the price of natural gas at $0.90/therm. If your overhead running costs are putting a cramp into your bottom line, contact MIURA for details.

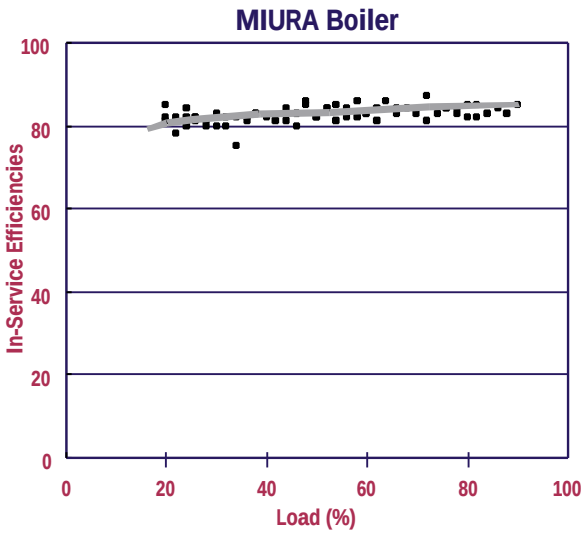
UNBEATABLE IN-SERVICE EFFICIENCIES

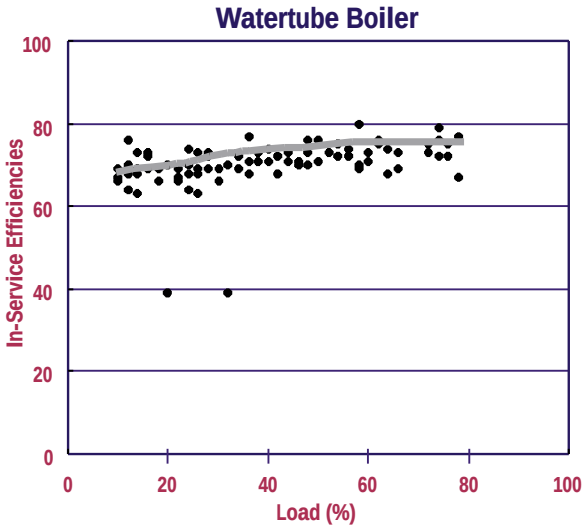
MIURA's computer-aided design results in optimal heating surface transfer with minimal water content for fuel-to-steam efficiencies of 85%. Typical firetube designs can deliver up to 83% fuel-to-steam efficiencies. However, in actual use, MIURA averages 10 to 40% fuel savings over standard firetube designs.

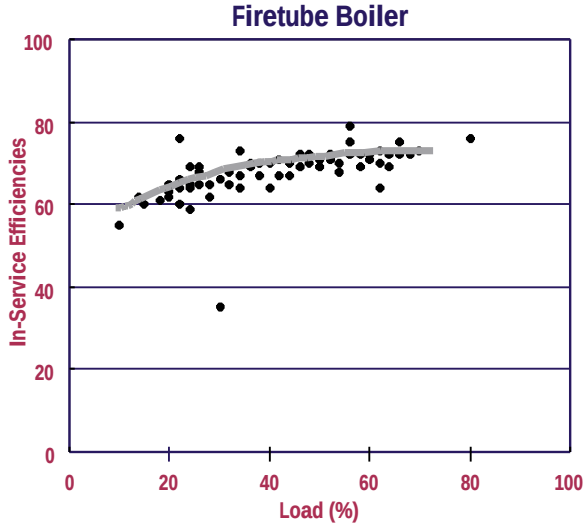
How does a 2% difference in fuel-to-steam efficiencies translate into a 10 to 40% ACTUAL FUEL SAVINGS? Contact your local MIURA representative for details.

FULL STEAM OUTPUT WITHIN FIVE MINUTES

Floating headers mean fast start-up. MIURA boilers produce fast steam in 5 minutes or less from a cold start-up. Standard firetubes require from 1 to 1.5 hour start-up times. MIURA's unique design yields significant time and fuel savings.







Compare original water content…
200 BHP MIURA boiler = 50 gallons
200 BHP Standard Firetube boiler = 1,160 gallons

SMALLER IS BETTER

MIURA's LX Series boilers occupy 50% less floor space than typical firetubes, and do not require tube pull space. Double capacity in the same space, or reduce space requirements by half for new construction. MIURA's compact design means much smaller radiation losses and larger fuel savings.

Standard Firetube/ Watertube Technology

MIURA's Revolutionary Technology

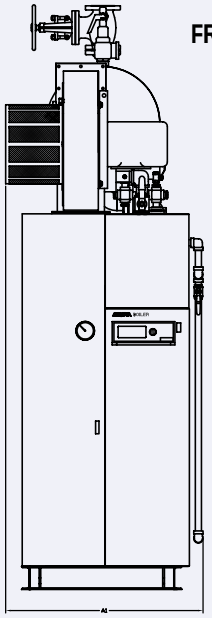
THE DESIGN

The MIURA Super LX Series deign consists of rows of vertical tubes sandwiched between two rectangular headers. Both headers are encased in a castable refractory with only the tubes exposed to flame and/or combustion gases. The upper header is attached to the lower header only by the tubes; as the tubes expand and contract, the headers float up and down accordingly. This "floating header" concept greatly reduces stress and eliminates the "leaky tube" problems associated with firetube and bent watertube designs. This design is the cornerstone of boiler fuel savings with full steam output within five minutes from a cold start. Turning boilers on and off as needed – only when needed – results in the highest in-service efficiency for industrial steam use and is magnified with multiple installations. MIURA truly sets new standards in Boiler Technology.

LOW NOx "NO FURNACE" BOILER

Cool, soft flame wraps around the tubes from a flame spread over a large surface area. This naturally controlled burn results inunbelievably low NOx, compact size and high efficiency.

FRONT VIEW

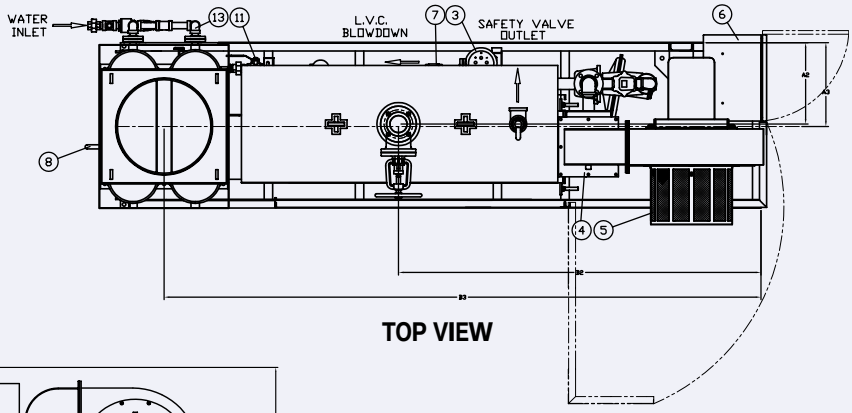


DIMENSIONS

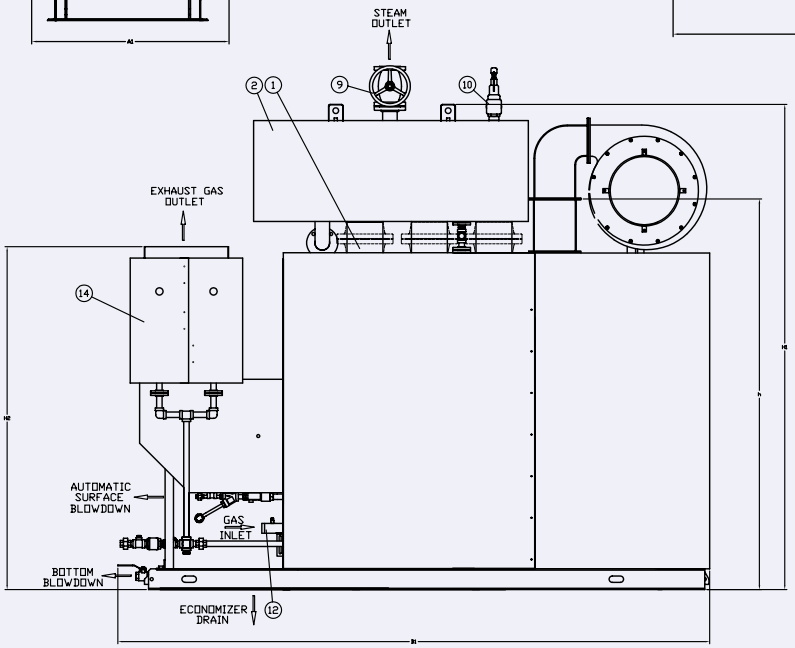
	A1	A2	A3	B1	B2	B3	H1	H2	h
LX-50 SG	43	16½	22	95	56	77	102½	62	68
LX-100 SG	41½	15	17	126½	88½	109½	106	68½	84½
LX-150 SG	42½	17	17½	142 ½	76	124½	125½	82½	87
LX-200 SG	42½	17	17½	142¼	76	124½	125½	82½	87
LX-300 SG	81	22	22	152	82½	116	138	80	84½

(Inches)

*The drawing illustrated is LX-150 SG

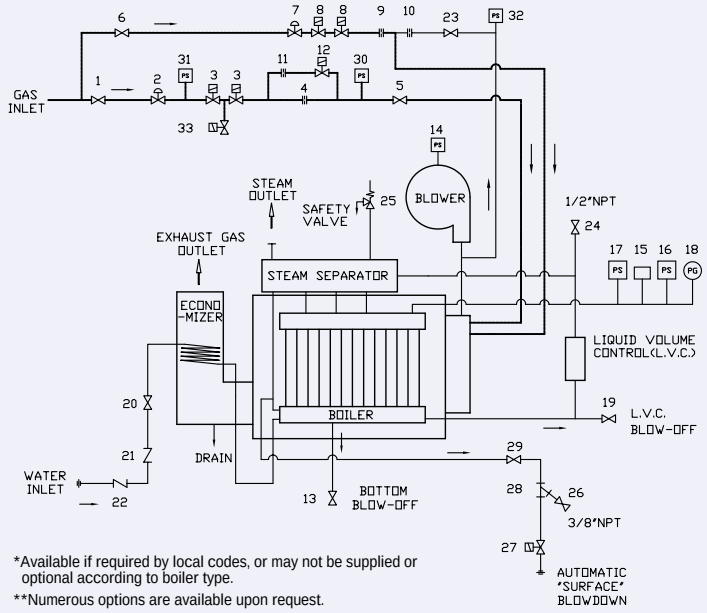


TOP VIEW



SIDE VIEW

NO.	NAME OF PART
1	BOILER VESSEL
2	STEAM SEPARATOR
3	LIQUID VOLUME CONTROLLER
4	WIND BOX
5	BLOWER
6	CONTROL BOX
7	MANUAL BLOWDOWN VALVE
8	MANUAL BLOWDOWN VALVE
9	STEAM OUTLET VALVE (OPTION)
10	MAIN SAFETY VALVE
11	AUTOMATIC BLOWDOWN
12	MAIN GAS TRAIN
13	FEEDWATER PIPING
14	ECONOMIZER



*Available if required by local codes, or may not be supplied or optional according to boiler type.

**Numerous options are available upon request.

SCHEMATIC VIEW (STANDARD)

NO.	NAME OF PART	NO.	NAME OF PART
1	MAIN GAS VALVE	18	PRESSURE GAUGE
2	MAIN GAS REGULATOR	19	L.V.C. BLOW-OFF VALVE
3	GAS CONTROL VALVE	20	VALVE
4	MAIN GAS ORIFICE (LOW)	21	CHECK VALVE
5	TEST FIRING VALVE	22	CHECK VALVE
6	PILOT GAS VALVE	23	AIR CONTROL VALVE
7	PILOT GAS REGULATOR	24	AIR VENT VALVE
8	PILOT GAS CONTROL VALVE	25	SAFETY VALVE
9	PILOT GAS ORIFICE	26	SAMPLE WATER VALVE
10	PILOT AIR ORIFICE	27	BLOWDOWN CONTROL VALVE
11	MAIN GAS ORIFICE (HIGH)	28	BLOWDOWN STRAINER
12	HIGH-LOW CONTROL VALVE	29	BLOWDOWN VALVE
13	BOILER BLOW-OFF VALVE	30	GAS PRESSURE SWITCH
14	PRESSURE SWITCH	31	GAS PRESSURE SWITCH
15	PRESSURE SENSOR	32	AIR PRESSURE SWITCH
16	STEAM PRESSURE SWITCH	33	GAS VENT VALVE*
17	STEAM PRESSURE SWITCH		

RELIABLE STEAM

XJ1 Micro Computer Boiler Control System

Instantly and easily check boiler operation status.

The XJ1 Micro Computer Boiler Control System works for you and with you, identifying problems and suggesting solutions in plain, descriptive English on an easy-to-read display.

- Greater control over steam pressure settings for steadier steam pressure.
- Allows for compensated adjustment of high and low fire scale thermocouple settings.
- Allows for compensated adjustment of automatic blowdown based upon Total Dissolved Solids (TDS) and/or blowdown rates.
- Easily interfaces with the MIURA "Colormetry" unit to eliminate scale formation due to water softener failure.

DETAILED BOILER CAUTIONS

The XJ1 Control System provides detailed information on the status of critical boiler functions before problems arise; to prevent and eliminate costly boiler shut downs:

1. Air Filter Clogged
2. High Ambient Temperature
3. Water Softener Fault
4. Blowdown Timing
5. Low Battery
6. High Boiler Water Concentration
7. Communication Error
8. Plugged Surface Blowdown Pipe

DETAILED BOILER OPERATIONS

The XJ1 Control System utilizes ten points to measure the performance of your boiler, displayed in an easy-to-read, user-friendly format:

1. Steam Pressure
2. Total time of Low Fire Operation
3. Total time of High Fire Operation
4. Scale Monitor Temperature
5. Overheat Thermocouple Temperature
6. Flame Voltage
7. Remaining time to Blowdown
8. Automatic Surface Blowdown Valve (On/Off)
9. Water Conductivity
10. 11-point combustion sequence

Simple, intuitive programming and operation.

The XJ1 Micro Computer Control System is as simple to set up and program as it is to operate.

MIURA's training program and the intuitive, easy-to-use interface provide an intelligent boiler that works for you and with you.

LX SERIES SPECIFICATIONS

ITEM	LX(L)-50 SG	LX(L)-100 SG	LX-150 SG	LX(L)-200 SG	LX-300 SG(*10)
Utilization Horsepower (*1)	50HP	100HP	150HP	200HP	300HP
Maximum Pressure	170 PSIG MAWP, 150 PSIG Maximum Operating (15 PSIG MAWP)				
Equivalent Output (*2)	1,725 LB/HR	3,450 LB/HR	5,175 LB/HR	6,900 LB/HR	10,350 LB/HR
Heat Output	1,674,000 BTU/HR	3,348,000 BTU/HR	5,022,000 BTU/HR	6,695,000 BTU/HR	10,050,000 BTU/HR
Efficiency (fuel to steam) (*3)	85% (80% without Economizer)				
Heating Surface Area	191 FT^2	261 FT^2	386 FT^2	386 FT^2	794 FT^2
Operational Weight	3,710 LBS	6,070 LBS	8,620 LBS	8,620 LBS	13,200 LBS
Shipping Weight	3,480 LBS	5,470 LBS	7,820 LBS	7,820 LBS	12,200 LBS
Dimensions Given are Approximate					
Width	43 in. (62 in.)	41.5 in. (65 in.)	42.5 in.	42.5 in. (66.5 in.)	81 in.
Length	95 in.	126.5 in.	142.5in.	142.5 in.	152 in.
Height	102.5 in. (147 in.)	106 in. (159 in.)	125.5 in.	125.5 in. (190 in.)	138 in.
Combustion System	Proprietary Forced Draft, Step Fired Modulation Hi-Low-Off				
Ignition System	Electric Spark Ignited, Interrupted Gas Pilot				
Power Supply	230, 460, 575 V, 3 PHASE, 60 HZ				
Max. Electrical Consumption	7.0 KVA (5.1 KVA)	13 KVA (12.3 KVA)	19.2 KVA (15.9 KVA)	19.2 KVA (15.9 KVA)	31.6 KVA
Fuel Type (*4)	Natural Gas or Propane (3-5 PSIG)				
Gas Consumption (*5)	1,960 SCFH	3,920 SCFH	5,880 SCFH	7,850 SCFH	11,770 SCFH
Gas Supply Pressure	3-5 PSIG Natural Gas or Propane				
Main Steam Outlet Valve	2 in. (4 in.)	2 in. (6 in.)	3 in. (8 in.)		4 in.
Safety Valve Outlet	One 1 ¼ in.	One 2 in.	One 2 ½ in.		Two 2 ½ in.
Main Water Inlet	¾ in.	1 in.			1 ¼ in.
Fuel Gas Inlet	1 ½ in.	2 in.			2 ½ in.
Automatic Surface Blowdown	One ¾ in.				Two ¾ in.
Manual Blowdown	Two 1 in.				One 1 in. & One 1 ¼ in.
Chimney Diameter (ID)	12 in.	12 in.	20 in.	20 in.	26 in.
Flame Detector	Ultraviolet Flame Eye Sensor				
Pressure Control	Adjustable Pressure Transducer and Switch				
Liquid Volume Control	Electrolytic Conductive Type				
Overheat Protection	Low Water Cut Off & Thermocouple				

"S" - Economizer **"G" - Natural Gas or Propane Fired** **"(L)" - Low Pressure**

Note:

1. Available 49 BHP rating for L.A. area.
2. Equivalent output calculated from and at 212°F (100°C) feed water at 212°F (100°C) steam.
3. Thermal Efficiencies are based on high heating values of fuels at 68°F (20°C) feed water.
4. UL and CGA/CSA approved for Natural Gas or Propane.
5. Gas consumption based on natural gas with high heating 1004 BTU/SCF.
6. All MIURA steam boilers are fully packaged and test fired at factory.
7. Built to meet or exceed UL & ASME standards in U.S.A.; CGA/CSA & B-51 standards in CANADA.
8. Low pressure steam is available in 50, 100 and 200HP only.
9. California Low NOx option available.
10. LX-300 exterior look is different.

Distributed By:

Printed in USA **October 05** **Version 1**

The descriptions and specifications are approximate.

Specifications subject to change to incorporate engineering advances. Manufacturer reserves the right to change specifications and dimensions at any time without liability for equipment previously or subsequently sold.

Patented in the U.S.A

MIURA BOILER
www.miuraboiler.com

MIURA Boiler Co., Ltd.
8 Copernicus Boulevard
Brantford, Ontario N3P 1Y4 Canada
Tel: (519) 758-8111 Fax: (519) 758-5294
e-mail: canada@miuraboiler.com

MIURA Boiler Inc. (L.A.)
1945 South Myrtle Av.
Monrovia, CA 91016-4854
Tel: (626) 305-6622 Fax: (626) 305-6624
e-mail: LA@miuraboiler.com

MIURA Boiler Inc. (Chicago)
600 Northgate Parkway, Suite M
Wheeling, IL 60090-3201
Tel: (847) 465-0001 Fax: (847) 465-0011
e-mail: chicago@miuraboiler.com

MIURA Boiler, Inc. (Atlanta)
1900 The Exchange St., Suite 330
Atlanta, GA 30339
Tel: (770) 916-1695 Fax: (770) 916-1858
e-mail: atlanta@miuraboiler.com

MIURA Boiler, Inc. (N.J.)
120 Sylvan Ave., Suite 4
Englewood Cliffs, NJ 07632
Tel: (201) 592-1260 Fax: (201) 592-1262
e-mail: newyork@miuraboiler.com