# Network



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Safety Precautions In order to use the product safely, please read the Instruction Manual first.

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The Best Partner of Energy, Water and Environment





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### **Once-Through Steam Boiler**



## Simple, High Performance Options That Take Full Advantage of Boiler Power

The EH series of oil-fired steam boilers is culmination of considerable research using the expertise and maintenance data that Miura has accumulated over many years. The series combines safety with economy, offering several models that designated to realize a number of environment issues.

### Features

### High efficiency and improved safety

### ω (omega) Flows Construction

The boilers using  $\omega$  (omega) flows construction which consist of vertically - mounted water tubes sandwiched at the top and bottom between two annular headers. The effective heat transfer surface area is large due to the bigger combustion chamber and heat absorption from contact heat transfer is increased due to a faster combustion gas flow.

### **New Structural Design**

The newly designed boiler construction and combustion gas flow help gain maximum heat transfer performance from a limited heat transfer area which less than 10m<sup>2</sup>. Effective usage is made by the entire heat transfer area, the result is 85% boiler efficiency (for EH-1000FS is 95%). Further, space saving is obtained by the compact design. (compare to previous version)

### Higher fuel economy and longer service life

### Surface Blowdown

One drawback that small once-through boilers are considered that the tendency for water to become concentrated more quickly compared to fire tube and water tube boilers because of their low water content. Accordingly, blowdown of concentrated water helps keep water concentration below a certain level and prevents alkaline corrosion of the water tube (EH-1000F & EH-1000FS).

### Low-Noise Burner

Substantially improved burner combustion performance, Quiet operation and blower noise. The surrounding environment is not affected, allowing operation at all hours of the day or night.

### Superior new design for ease of use

Easy Operation, inspection and maintenance due to a simple structural design.



### **Basic Specification**

MIURA TYPE	EH-500F	EH-750F	EH-1000F	EH-1000FS	REMARK					
ITEM			UNIT							
Main Body										
Boiler Type			—	Once-through steam boiler						
Working Pressure			MPa	0.49-0.88				*9,*11		
Equivalent Output			kg/h	500	750	1000	1000			
Actual Output			kg/h	419	629	838	838	*3		
Heat Output			kW	313	470	627	627			
Boiler Efficiency			%	85 9			95	*2		
Water Content			L	140	175	150	150			
	OIL	Kerosene	L/h	38.1	57.2	76.2	68.3	*1, *2 , *10		
Eucl Consumption			kg/h	30.5	45.7	61.0	54.6			
		Heavy Oil A	L/h	36.1	54.2	72.3	64.7			
			kg/h	31.1	46.6	62.2	55.7			
Power Supply			—	AC 380 V 50 Hz 3 phase						
Required Wire Diameter			mm²	2.0	2.0	2.0	2.0	*6		
Power Circuit Breaker Capacity			Α	15	20	30	30	*4,*7		
Rated Power Consumption			kW	1.5	3.4	4.2	4.2	*4		
Max. Electrical Consumption 50Hz			kVA	3.43	6.15	7.15	7.15	*4		
Product Weight			kg	990	1,250	1,420	1,680			
Connection Diameter										
Steam Outlet				32	40	5	0			
Safety Valve Outlet				40		50		*5		
Feed Water Inlet				25				*4		
Boiler Blowdown Outlet			A	25						
Fuel Inlet				20				*8		
Inspection Port				50						
Surface Blowdown Outlet				-		10	[10]	*12		
Stack Diameter			φmm	250	290	330	250			

#### Overall Dimensions [EH-500F - 750F - 1000F - 1000FS]



Flow Sheet [EH-500F - 750F - 1000F - 1000FS]



\*]. Heat output for fuel is based on the following values

		3
Fuel type	Lower heating value	Density
erosene	43.5 MJ/kg	0.80 g/cm <sup>3</sup>
eavy Oil A	42.7 MJ/kg	0.86 g/cm <sup>3</sup>

\*2. (1) Boiler efficiency is based on the following

Operating Conditions :

Operating pressure 0.49 MPa {5 kgf/cm<sup>2</sup>}

feed water temperature 15°C, supply air temperature 35°C

Land boilers - Heat balancing : JIS B 8222

(2) The error has the following tolerances.

Error for boiler efficiency ±1%, error for fuel consumption ±3.5% \*3. Actual output evaporation is based on a feed water temperature 15°C. and steam pressure 0.49 MPa.

- \*4. If the feed water temperature is 85°C or higher, the high temperature water specification must be used.
- \*5. The safety valve outlet shows the diameter of the elbow that connects to the outlet of the safety valve.
- \*6. Power supply wire diameter indicates the wire diameter of
- crosslinked polyethylene insulated PVC sheathed cable (CV). \*7. The power circuit breaker must be an earth leakage circuit
- breaker (with overcurrent protection).
- \*8. A copper joint 10 A and oil strainer 10 A are installed on the upstream side of the fuel inlet for each model.
- Install a pressure reducing valve or equivalent when the steam lower than the working pressure range is required.
- \*10. When using Heavy Oil A, JIS Class 1 No. 1 is recommended. Sulfur contents in fuels and dew drops make the inside of the stack corrosive. In addition, when corrosives scatter, it may cause corrosion and contamination of roofs and other areas. Therefore, JIS Class 1 No. 1 such low-sulfur is recommended.
- \*11. If the pressure exceeds the working pressure range, steam leak or blowout from the safety valve may occur. Contact your local Miura office when the steam pressure setting of the boiler exceeds the working pressure range.
- $^{\ast}1^{2}.$  The Connections with values in [ ] are connected to the Soot blow drain outlet.

S Specification model is designed for use with feed water at a temperature of 55°C or higher.

For the sake of safety, an earthquake detector should also be installed.

1 Oil strainer	20 Check valve
2 Oil air vent valve	21 Feed water stop valve
3 Oil pump	22 Boiler blowdown valve
Y-type strainer	23 Water sampling port
5 Oil pressure gauge	24 Ball valve
6 Solenoid valve (low fire)	25 Accumulator
7 Solenoid valve (high fire)	26 Air pressure switch
8 Shutoff solenoid valve	27 Check valve
9 Safety valve	28 Soot blow valve
10 Main steam valve	29 Leak detection valve
11 Air vent valve	30 Soot blow drain valve
2 Steam pressure switch	31 Sight glass
13 Steam pressure gauge	
14 Surface blowdown valve	
15 Y-type strainer	
16 Surface blowdown solenoid valve	
17 Orifice	
18 Y-type strainer	
19 Feed water pump	