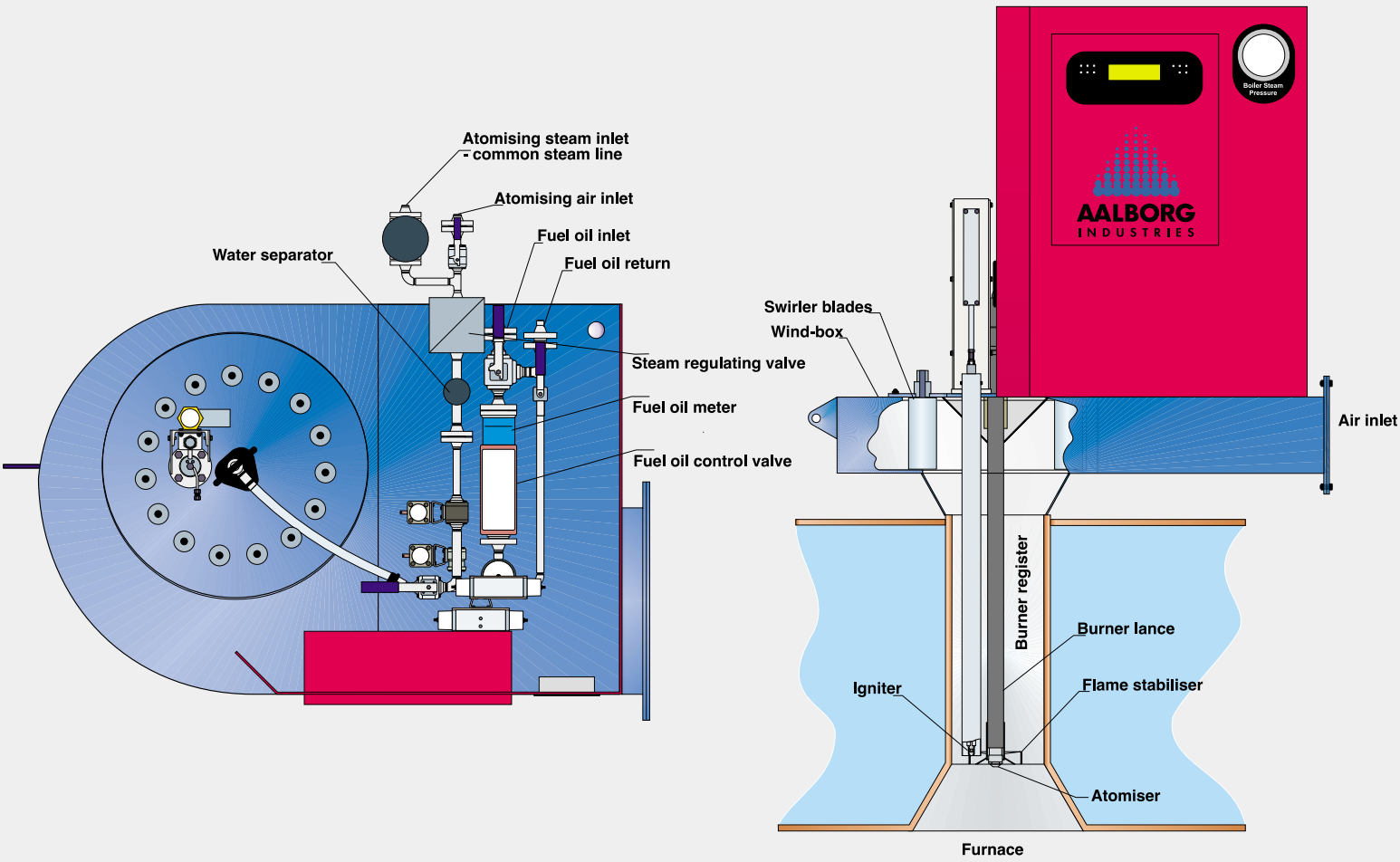
Steam atomising oil burner for diesel oil and heavy fuel oil KBSD 950 – KBSD 4150

KBSD



The KBSD steam atomising burner is designed for use on our top-fired boilers and is delivered pre-mounted.
A dynamic wind-box provides for low pressure loss and a stable combustion at low loads. All burner mountings are arranged to ensure easy installation and maintenance.

Capacity range: 1.7 – 46.6 MW

KBSD 950 – KBSD 4150
steam atomising burner

Description

The KBSD steam atomising burner has been designed to meet customer requirements such as high turn-down radio, minimum installation and operation costs, and the capability to produce inert gas at low loads.

Furthermore, the burner is a low-NO_x burner that will meet future marine environmental legislation regarding NO_x and particulate emissions.

Combustion processes are controlled by adjusting the swirl angle of the air flow, enchanced by very reliable system components controlling the fuel air flow. The KBSD burner has passed a rigorous and very extensive testing program, proving that the burner performs well on all grades of fuel oil. Additionally, the burner design has made it possible to achieve stable combustion with an excess air ratio of approx. 1.15.

Safe ignition of the burner is ensured by the fixed ignition burner which is equipped with its own ignition transformer, oil pump and nozzle. During operation of the main burner, the ignition burner is purged with air in order to prevent coke formation on the nozzle and the electrodes.

STANDARD PRODUCT RANGE

Capacity and dimensions

Burner type	Guideline boiler output	Capacity Min. - max.	Diesel oil consumption	Heavy fuel oil consumption min. - max.	Combustion air consumption max.	Combustion air consumption min.	Atomising steam consumption	Atomising air consumption
	kg/h	MW	kg/h	kg/h	Nm^3/h	Nm^3/h	kg/h	kg/h
KBSD 950	12,500	1.7–10.6	890	150–950	11,204	2,188	46	85
KBSD 1200	16,000	1.7–13.4	1,140	150–1,200	14,409	2,312	60	110
KBSD 1500	20,000	1.7–16.8	1,440	150–1,550	18,244	2,390	76	140
KBSD 1900	25,000	2.1–21.2	1,790	190–1,900	22,642	2,987	94	170
KBSD 2250	30,000	2.5–25.1	2,140	225–2,250	27,092	3,522	110	200
KBSD 2650	35,000	3.0–29.6	2,510	265–2,650	31,805	4,150	130	240
KBSD 3000	40,000	3.4–33.5	2,880	300–3,000	36,393	4,460	150	270
KBSD 3350	45,000	3.7–37.4	3,220	335–3,350	40,710	5,260	170	310
KBSD 4150	55,000	4.7–46.6	3,950	420–4,150	49,924	6,362	210	370

General burner data

Heavy fuel oil data			**General data**		
Max. viscosity at 50°C	700	cSt	Atomising steam/air pressure, min	6.5	bar (g)
Max. viscosity at burner inlet	15	cSt	Excess air ratio	1.15	–
Calorific value	40.2	MJ/kg	Combustion air temperature, design	45	°C
			Fuel oil delivery pressure	2.5	bar (g)
Diesel oil data (for ignition burner)					
Viscosity	1.3–12	cSt	NO_x emissions	0.6	g/kWh
Calorific value	42.2	MJ/kg	Particulate emissions	0.3	g/kWh