



The KBSA steam atomising burner is designed for use on our top- and side-fired boilers and can be delivered premounted. The use of oil flowmeter and modulation of the atomizing steam pressure ensures a stable combustion at all loads, also in the lower end. All burner mountings are arranged to ensure easy installation and maintenance.

Capacity range: 1.7 – 46.9 MW

KBSA 600 – KBSA 4200 steam atomising burner

Description

The KBSA steam atomising burner has been designed to meet customer requirements such as high turndown ratio, minimum installation and operation costs, and the capability to deliver inert gas at low loads.

Two swirlers produce a mixture of air and fuel close to the stoichiometric value. As a result, low excess air ratio during combustion and low oxygen content in the exhaust gas provide good

economy. For maintenance and inspection purposes, the air register is retractable from the windbox.

Automatic shut-off valves, re-circulation valve, solenoid valves, needle valves, and other necessary burner components are fitted on the windbox. Standard ball valves are used throughout with electric/pneumatic actuators on the automatic valves. A water and steam separator is incorporated to achieve a suitable, dry atomising steam quality.

Flexible hoses connect the valve arrangement and burner lance on the oil side and on the atomising steam side. Safe ignition of the burner is ensured by means of the diesel 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 electrodes.

STANDARD PRODUCT RANGE

Capacity and dimensions

Burner type	Guideline boiler output kg/h	Capacity Min. - max. MW	Diesel oil consumption kg/h	Heavy fuel oil consumption min. - max. kg/h	Combustion air consumption max. Nm ³ /h	Combustion air consumption min. Nm ³ /h	Atomising steam consumption y-jet kg/h	Atomising air consumption kg/h
KBSA 600	8,000	1.7–6.7	572	150–600	7,328	2,032	20	36
KBSA 750	10,000	1.7–8.4	714	150–750	8,819	2,133	28	49
KBSA 950	12,000	1.7–10.6	905	150–950	11,204	2,188	37	66
KBSA 1050	14,000	1.7–11.7	1,000	150–1,050	12,491	2,250	43	76
KBSA 1200	16,000	1.7–13.4	1,143	150–1,200	14,404	2,312	49	87
KBSA 1550	20,000	1.7–17.3	1,477	155–1,550	18,777	2,420	66	116
KBSA 1900	25,000	2.2–21.2	1,810	190–1,900	22,642	2,987	82	145
KBSA 2250	30,000	2.5–25.1	2,143	225–2,250	27,092	3,522	98	173
KBSA 2650	35,000	3.0–29.6	2,524	265–2,650	31,805	4,150	118	208
KBSA 2950	40,000	3.3–32.9	2,810	295–2,950	36,600	4,647	132	233
KBSA 3350	45,000	3.7–37.4	3,191	335–3,350	40,710	5,260	151	266
KBSA 4200	55,000	4.7–46.9	4,001	420–4,200	49,924	6,362	191	337

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
Calorific value	42.2	MJ/kg

DATA SHEET series