



The operation of the KB-W rotary cup burner is automatic, simple and reliable – also when fired with a combination of fuels as is often the case.

The design is compact and the burners easy to maintain.

Capacity range: 0.55 – 6.2 MW
50 – 550 kg/h

KB 150W – KB 550W rotary cup burner

Description

The KB-W rotary cup burner has been designed to meet customer requirements and offers reliable operation, easy maintenance and minimum installation requirements. The design is based on Aalborg Industries' long-term experience in marine boilers and combustion technology, ensuring optimum burner performance for demanding customers.

The working principle of rotary cup burners is based on atomising by centrifugal force. The atomising cup is driven

at high speed via a heavy-duty belt drive.

The oil is gently positioned at low pressure into the spinning cup where gradually, and forced by the centrifugal action of the cup, it moves forward until it is thrown off the cup rim as a very fine, uniform film.

The high-velocity primary air discharged around the cup strikes the oil film, breaks it up and converts it into a mist of fine particles which are introduced

into the combustion zone and burner.

The secondary air required for complete combustion is supplied by a forced draught fan through the windbox and burner air register. Normally, atomising is effected at a viscosity of approx. 45 cSt. which ensures a particle size small enough to burn quickly and completely.

Diesel oil, heavy fuel oil or waste oil fired rotary cup burner

KB-W is a typical waste oil-fired rotary cup burner with an air-cooled pre-combustion chamber with brickwork.

STANDARD PRODUCT RANGE

Capacity and dimensions

Burner type	Guideline boiler output kg/h	Capacity Min. - max. MW	Capacity Min. - max. kg/h	Burner motor max. power kW	Burner air pressure loss mm WG	Air flow max. Nm ³ /h	Primary air fan	Air inlet flange position
KB 150W	1,900	0.55-1.7	50-150	2.4	200	2,530	Integrated	180P
KB 250W	3,200	0.60-2.8	55-250	2.4	220	4,350	Integrated	180P
KB 350W	4,000	0.65-3.9	60-350	3.3	240	6,070	Integrated	180P
KB 450W	5,000	0.70-5.0	65-450	3.3	265	7,720	Integrated	180P
KB 550W	6,000	0.80-6.2	75-550	6.0	265	9,500	Integrated	180P

General burner data

Heavy fuel oil data	General data				
Max. viscosity at 50°C	700	cSt	Excess air ratio	1.15	-
Max. viscosity at burner inlet	45	cSt	Combustion air temperature, design	45	°C
Calorific value	40.2	MJ/kg	Fuel oil delivery pressure	2.5	bar (g)

Diesel oil data (for ignition burner)

Diesel oil data (for ignition burner)	General electrical data				
Viscosity	1.3-12	cSt	Main voltage	440/380	V
Calorific value	42.2	MJ/kg	Pilot voltage	220/110	V
			Frequency	50/60	Hz

Waste oil data

Net calorific value	29.3	MJ/kg
Viscosity at burner, max.	40-50	cSt
Max. water content (weight)	18-20	%
Max. grain size of solids (small fibres)	2	mm
Max. solid content, approx.	5	%

DATA SHEET series