



Oil-fired steam boiler

MISSION™ OM-TCi

MISSION™ OM-TCi sets the new standard for fuel economy in marine boilers. The high efficiency means less fuel consumption, thereby lower operating cost for the ship owner and reduced emissions to our environment.

MISSION™ OM-TCi is a vertical oil-fired boiler with a large furnace and an enhanced convection part. The standard boiler can be fired with various fuel oils.

Capacity range: 8,000 – 20,000 kg/h





Photo by Aker Yards



Aalborg Industries' own design of rotary cup burners (KB™) or the steam atomizing types (KBSA™) can be used on the MISSION™ OM-TCi boiler. The burners have a long life cycle and are easy to maintain.

MISSION™ OM-TCi

MISSION™ OM-TCi is a vertical cylindrical steam boiler in the capacity range of 8,000 - 20,000 kg/h. It has been developed based on our well-proven technology and long experience. The best features of the well-known UNEX™ CHB and MISSION™ OM boilers have been incorporated into the new boiler design.

Furnace

MISSION™ OM-TCi consists of a large furnace with gas-tight membrane walls. A sufficient number of downcomers ensures safe natural circulation, and adequate furnace dimensioning guarantees good combustion, moderate loading and low material stresses.

Convection part

The cylindrical shell surrounds the smoke tubes. These smoke tubes have enhanced heat transfer features guaranteeing low

exhaust gas temperature and thus high efficiency.

Burner

The standard boiler can be delivered with an Aalborg Industries burner with fully automatic operation and control. The burner is designed for a high turndown ratio with complete combustion at low oxygen levels. Aalborg Industries' KB™ rotary cup burner or KBSA™ steam atomizing burners are offered based on application or customer preference.

Control system

The burner and boiler can be monitored and regulated by Aalborg Industries' own panels such as MISSION™ CONTROL, MISSION™ CONTROL TOUCH or the self-diagnostic MISSION™ STEAM PILOT safety and control systems.

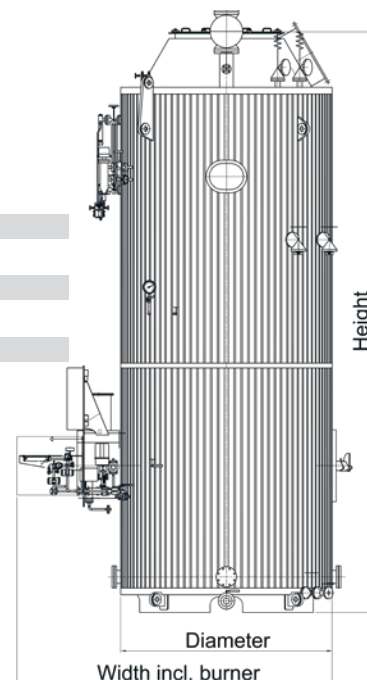
STANDARD PRODUCT RANGE

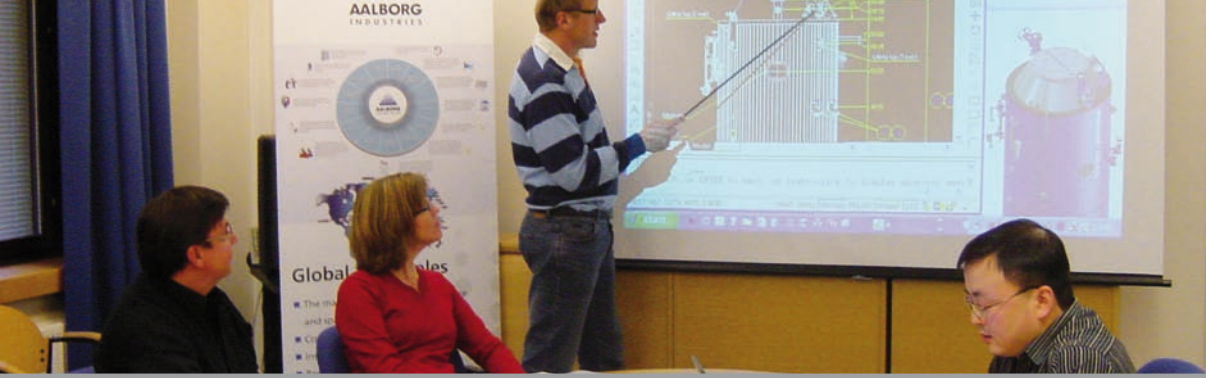
Capacity & dimensions

Steam capacity	Design pressure	Height *)	Width incl. Diameter	Width incl. burner	Total dry weight	Water volume
kg/h	bar(g)	mm	mm	mm	kg	m ³
8,000	10	6,995	2,450	3,870	16,200	7.6
10,000	10	7,125	2,600	3,870	18,600	8.4
12,500	10	7,250	2,900	4,290	22,100	10.6
16,000	10	7,740	3,100	4,490	26,200	11.9
20,000	10	7,920	3,500	4,930	32,300	15.3

*) If exhaust gas economizers are connected, the height is increased or a dual water level system is used

In addition to our standard scope of supply, customized solutions can be offered based on specific requirements.





High efficiency & environmental concern

The upgraded thermal design with optimized flue gas oxygen content ensures a total efficiency of 89–92% depending on boiler load conditions, which is in average 6% above the typical boilers in this capacity range. This means less fuel consumption and lower CO₂ and NO_x emission levels. On a 16,000 kg/h boiler operating 5,000 hours at 75% load every year, this means USD 130,000*) saved on fuel cost annually.

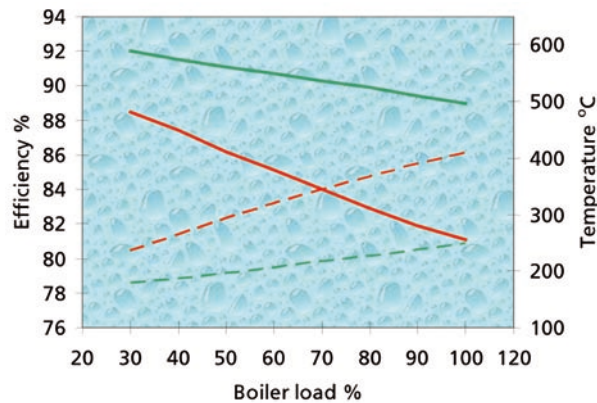
*) at the fuel price of 500 USD/ton

Features & benefits

- Traditional and proven design
- easy to operate and very reliable
- Standard product - fast engineering support and short delivery time
- Easy to clean
- High efficiency with low fuel consumption

Boiler efficiency and temperature comparison

Efficiency %: — MISSION™ OM-TCi — Typical boiler
 Temperature °C: - - - MISSION™ OM-TCi - - - Typical boiler



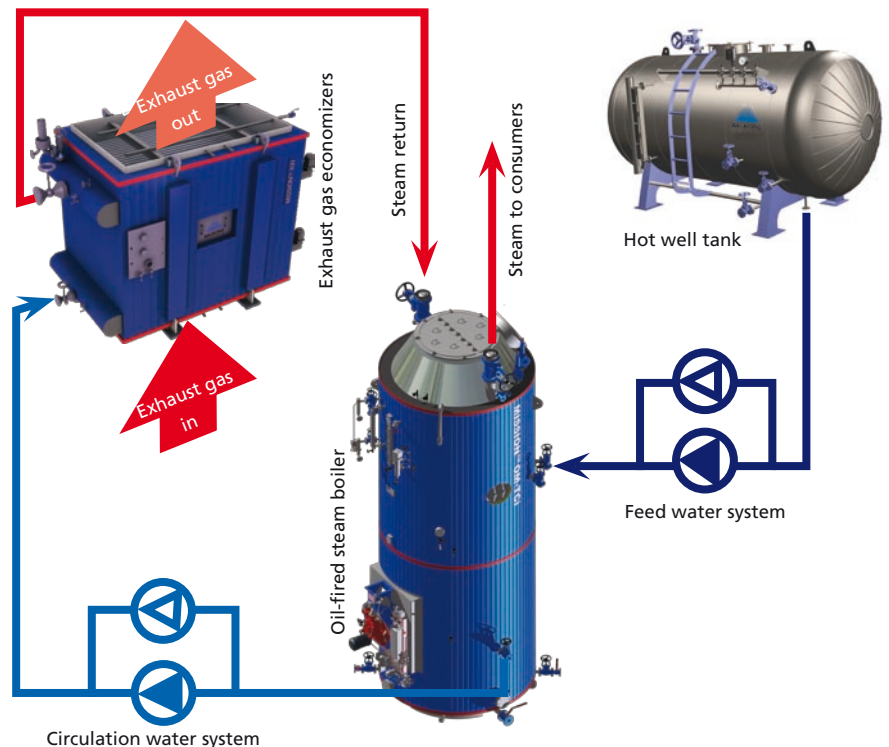
The diagram shows a comparison of the boiler efficiency (based on LCV) and flue gas outlet temperature between the MISSION™ OM-TCi boiler and a typical marine boiler



Remote diagnostics is available for Aalborg Industries' latest design of control systems (MISSION™ Steam Pilot) when trouble-shooting and reprogramming is required.

System solutions

Aalborg Industries offers total solutions. All marine accessories for heat recovery and auxiliary boiler systems can be supplied by Aalborg Industries. MISSION™ OM-TCi can operate as a steam drum for the exhaust gas economizers onboard.





The MISSION™ concept

Aalborg Industries' high quality and documentation standards are evident in our MISSION™ concept for marine boilers, burners and control systems. The **MISSION™ concept** provides detailed configurations and well-defined options to shipyards and shipowners.

The MISSION™ series embodies reliable, high quality, innovative and environmentally friendly solutions. This generation of boilers, together with our range of burners, was developed as high performance equipment of superior quality from quotation and documentation through to manufacturing and plant commissioning.

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