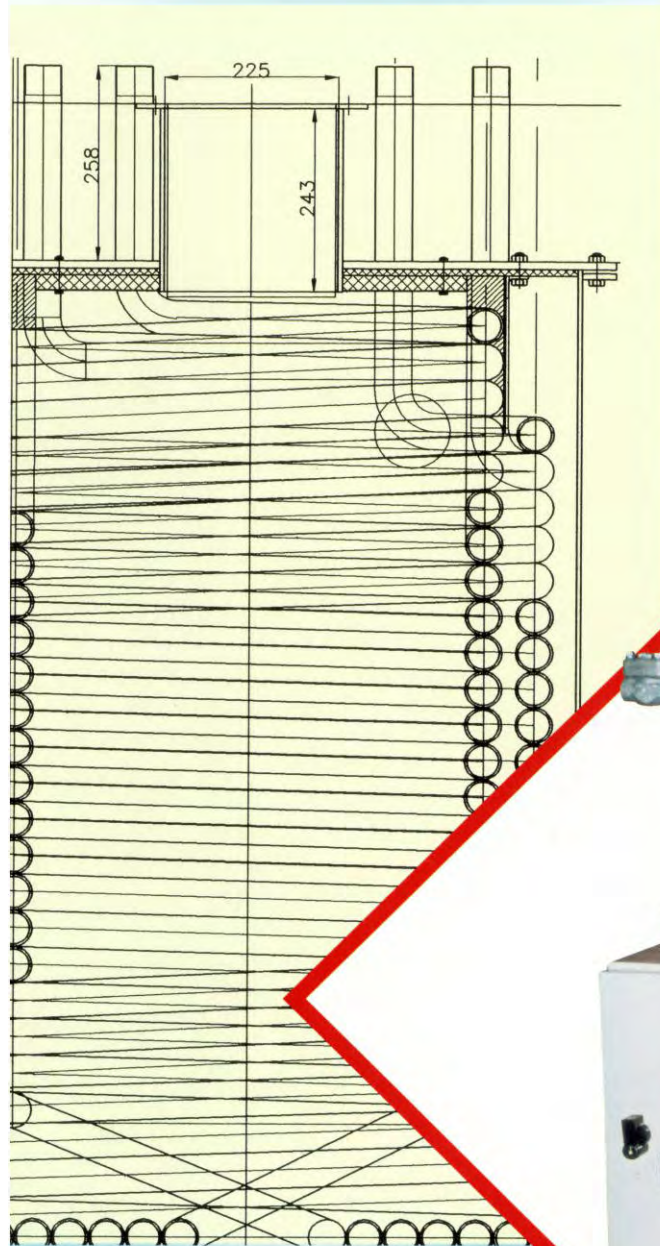


DA

Dampgeneratorer Steam Generators

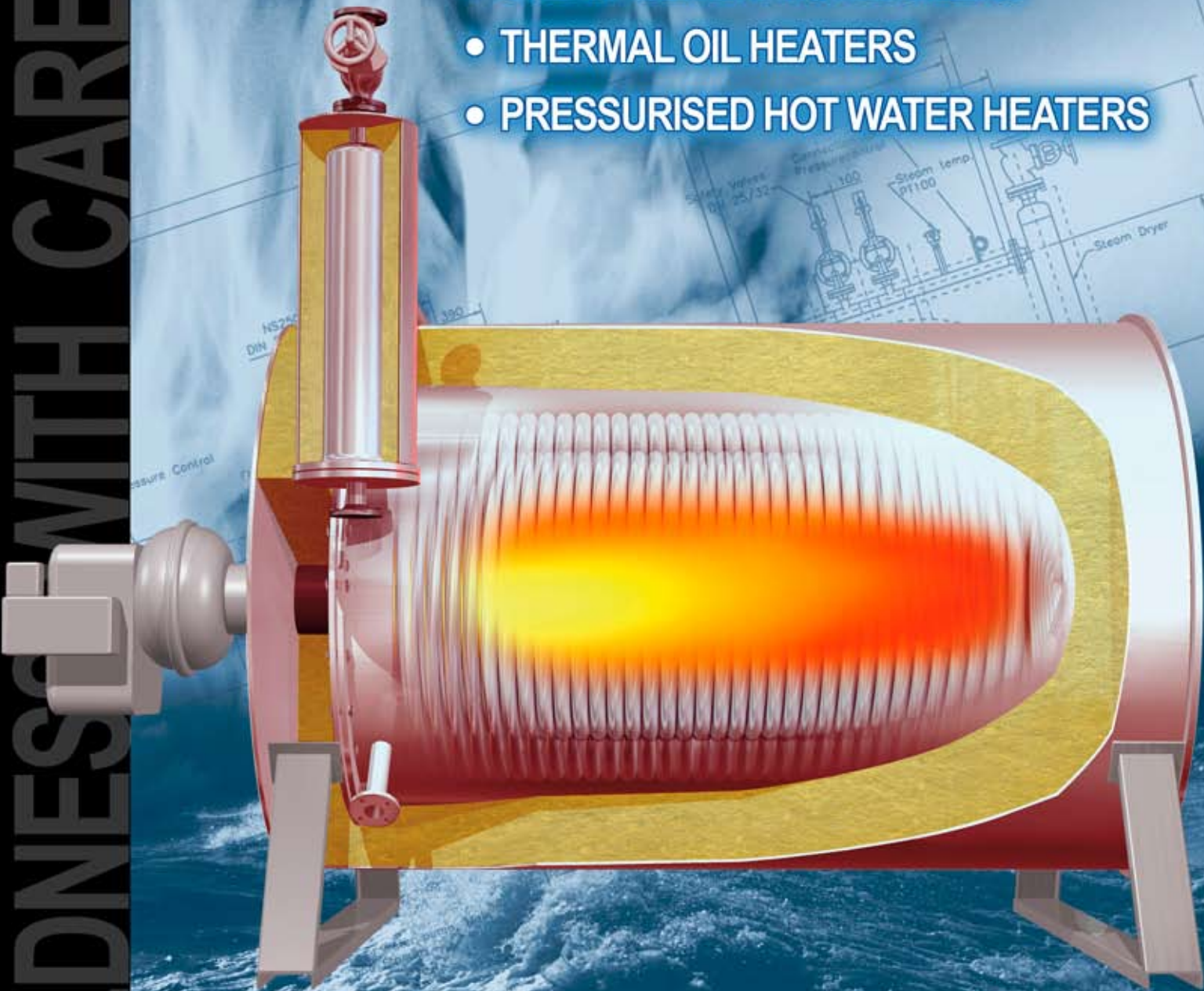


Kompakt & Hurtig Opstart
Compact & Rapid Start-Up

TT BOILERS

- STEAM GENERATOR BOILERS
- THERMAL OIL HEATERS
- PRESSURISED HOT WATER HEATERS

BOLDNESS WITH CARE



AB&Co

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Steam Generator Boilers
Compact Steam Boilers

Rapid Start-Up
Safe in Operation

AB&CO · TT BOILERS

The boiler maker AB&CO · TT BOILERS LTD. have since the middle sixties produced industrial boilers and heaters for thermal fluid (hot thermal oil), steam, water and recuperative type (heat recovery).

The boilers are famous for their high reliability and efficiencies, but also for the customised design when required by the special circumstances.

TT BOILERS have a service organisation dealing with service and delivery spare parts throughout the world. A staff of field engineers offers start-up, commissioning, repair, scheduled overhauls etc.

TT BOILERS joined the AB&CO company group in 2000 and in this set-up the Danish owned company group AB&CO · TT BOILERS today design, manufacture and deliver a wide range of customised thermal solution within process heating and heat recovery – the key products being small and medium sized industrial boilers and special heat exchanger for process air, exhaust gas and other special fluids.

INTRODUCTION

Opposite conventional steam boilers, the water in the steam generators contains a very small water and steam volume (content of the pressure vessel). This gives a lot of advantages:

- Easy to operate - normally no requirement for boiler authorisation
- Rapid start-up and establishing full steam pressure
- Compact and easy to adapt in the existing machinery arrangement
- Price attractive - especially at low steam rates.
- Approved for industry, marine and offshore.

The steam generators are delivered in the range 150 - 5,000 kg/h steam at 1 barg all the way up to 190 barg (for special applications). These complete units are easy to install and does not require any special foundation, but can be place directly on concrete floor. Rapid start-up down to 2 - 3 minutes on the smaller

CONSTRUCTION

The steam generators heaters are made with coils made of seamless tubes, where the feed water is preheated and evaporated during the flow through these. The heat is transferred to the water/steam mixture as radiant heat in the combustion chamber, where the inner cylindrical tube coil and a flat tube coil forms the chamber wall and the bottom respectively. Consequently refractory concrete is avoided. The combustion gasses are hereafter cooled in the outer convection part, as the gasses pass the space between the two tube coils. The thermal design ensures a modest volume of steam relative to the size of the heater, and allows unlimited thermal expansion due to

the high temperatures. All TT Boilers steam generators and steam boilers are designed and equipped according to German TRD boiler regulations and Danish AT boiler regulations (and corresponding ratified EN-norms).

DT steam generators are made in carbon steel and different grades of stainless steel.



Skid-mounted steam boiler system

As standard the steam boilers are provided by international recognized and only high quality burner brands - for natural gas, light fuel oil, heavy fuel oil and combinations (dual fuel). Demands for special burner designs can be meet and adapted in the heater design. All boilers are carefully checked, controlled and function tested prior to dispatch from the workshop.

Beside the standard execution the DT boiler can be delivered in e.g. following variations:

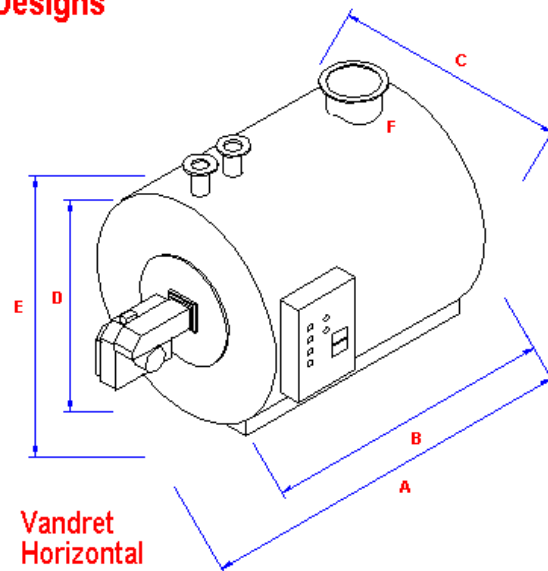
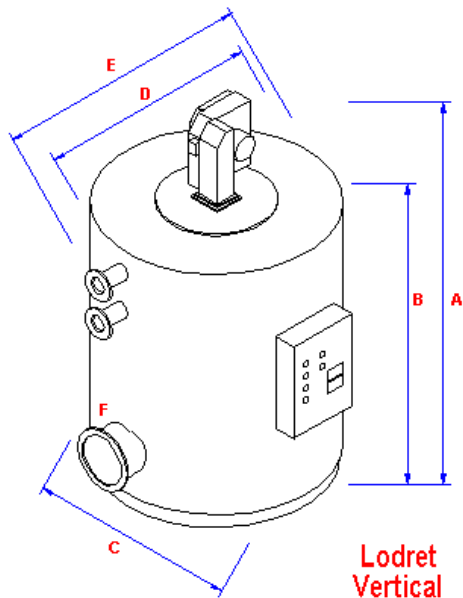
- High pressure – up to 190 barg / 350°C
- All stainless steel - for production of clean steam
- Complete skid-mounted steam plants
- Mobile steam - build in a container or on a trailer.



Contact us at : ttboilers@abco.dk

More information at : www.abco-ttboilers.com

Alternative Designs



TT BOILERS

Steam Generators type DT

Low NOx · High Efficient

Type DT - Low NOx Size [kg/h]	Heat Capacity [kW]	Oil · Gas Consumption [kg/h · Nm ³ /h]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Weight [kg] Empty	Weight [kg] Full
150	104	10,0 · 10,7	1.900	1.300	1.200	800	1.200	ø210	250	260
300	209	19,9 · 21,3	2.000	1.400	1.400	1.000	1.500	ø210	450	470
400	278	26,6 · 28,4	2.200	1.400	1.400	1.000	1.500	ø210	450	470
600	417	39,9 · 42,6	2.550	1.850	1.500	1.100	1.500	ø250	600	650
800	556	53,2 · 56,8	2.700	2.000	1.600	1.200	1.700	ø300	1.050	1.100
1000	695	66,5 · 71,0	3.100	2.400	1.600	1.200	1.800	ø350	1.300	1.400
1200	834	80,0 · 88,0	3.300	2.400	1.600	1.200	1.800	ø350	1.300	1.400
1500	1.043	100 · 107	3.600	2.800	1.800	1.400	2.000	ø400	1.900	2.100
2000	1.390	133 · 142	4.000	3.300	1.900	1.500	2.050	ø400	2.200	2.600

TABLE VALUES · Presumptions:

The below stated values for heat capacity and fuel consumptions are based on 60°C feed water temperature, 5 bar steam pressure, Abt. 90% efficiency and normal European quality light fuel oil (Hi=42.300 kJ/kg) and natural gas (Hi=39.600 kJ/Nm³).