



Biomass Boiler

Biomass Waste To

Energy Solution

About us

In 1983 the company GETABEC was formed to sale, distribute and install German steam boilers and related equipment in Thailand. During the strong industrialization of Thailand the demand for fire tube boiler increased. The cooperation with German Companies and know how providers led to the name "German Thai Boiler Engineering Company or in short GETABEC.

In the nearly 40 years of history GETABEC has emerged as one of the leading Boiler and Pressure Vessel Manufacturer in South East Asia. Two factories in Thailand with state of art production facilities, a team of multi-discipline Engineers, a motivated and high skilled work force ensure that each request is treated with required attention.

Starting with the formation of GETABEC until now, it is always the desire of GETABEC to fulfill the customer requirements towards quality and reliability of products services. Already in 1995 Getabec implemented a quality management system covering all process in the organization. GETABEC also implemented a quality control system to ensure that our boilers are meeting the strict requirements of the ASME code as well of the European Directive for Pressure Equipment. On request by the client, GETABEC will be able to deliver the boiler and pressure vessel either with the CE Mark or as stamped ASME Boiler and pressure vessel.



GETABEC has delivered boilers and pressure vessels in all parts of the world. It also started its international sales network by opening of GETABEC Vietnam Co., Ltd in 2014. In 2019 GETABEC formed together with its long term Partner Schneider Kessel Germany an Engineering Company, as Schneider Energy System GmbH, not only to cater the European Market, but also to support GETABEC's desire to design highly efficient and environmental protecting products



GETABEC's Policy statement

GETABEC recognizes that our work and all our action will have an impact on society and that our products will change the environment.

We are committed to work on designing and manufacturing our products with a holistic perspective of humans and the environment.

We are aiming towards sustainability, which will benefit the environment and our society.

With our key values:

- Social Responsibility
- Quality
- Technology

GETABEC aims to grow by partnering with our customers.

We strive towards continual improvement of our products and performance.

With innovation we are aiming to make this world a better place.

Invention drive the world

Today the idea of renewable energies has captured the world. Natural resources are diminishing and the price fluctuation of the fossil fuels has led to a higher usage of Biomass and Biogas for the generation of energy. The global warming as the result of burning fossil fuels is pushing all of us to find alternative energy sources. Photovoltaic and wind turbines have established themselves as good sources of electricity, but in the process industry we need steam and heat. For carbon neutral steam production the biomass boilers for solid fuels have proven to be effective and reliable. Different processes are used to burn the solid fuels. Our engineering team will evaluate the various parameters from availability of the biomass, the quality of the biomass on the fuel side, to efficiency, easy to operate, availability of spare parts, maintenance and repair friendliness together with our clients to provide the best technology suitable to the project to our customer. GETABEC's Technology provides you with an alternative Energy



POWER & COGENERATION PLANTS

1 MWe to 20 MWe EPC Solutions

Our biomass waste to electricity technology gives you high reliability and low maintenance solutions that allow you to maximize your ROI. Cogeneration solutions gives extra flexibility to tap steam for other local processes. Combined with our EPC experience, we can provide a "One-stop, No headache solution".



STEAM & HOT WATER SOLUTIONS

1 MWth to 1 00 MWth, 0.5 to 1 00 tph, 5 - 1 00 barg

With a range of technologies, we provide customized solutions to suit many types of waste to industrial steam and hot water energy requirements. Our technological solutions can handle stable process flows, high fluctuation loads, buffer loads, unreliable biomass waste supply and automation to suit the local skill levels.



THERMAL OIL SOLUTIONS

1 MWth to 1 2 MWth

High efficiency thermal oil designs comes with a range of different technologies to suit most budgets. Our range of solutions cater to different requirements from highly autonomous systems, minimal stop times, low maintenance & operational costs, flexible biomass waste fuel to backup burners on biogas or oil & gas.

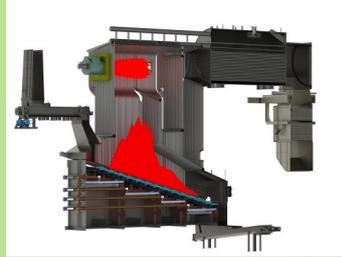


INDUSTRIAL WASTE, RDF & SRF SOLUTIONS

1 MWth to 50 MWth, 1 to 50 tph, 5 - 1 00 barg

With a solid understanding and significant experience in this very complex fuel, our approach to this market sector is to work with clients to create a complete working solution. Fuel separation, handling, burning, emission control, online cleaning and ash management requires careful planning and detailed engineering.

ADVANCED TECHNOLOGY



Each operation, each location, each problem require a different solution. To receive the optimum output, the fuel, the boiler and the firing system must be harmonized. The material selection will guarantee long lasting solutions. The design must be maintenance- and repair- friendly to reduce the running cost. The firing system should bring the highest possible output from the fuel used, but also allow fluctuation in fuel quality. The flue gas cleaning system must meet the requirements of all interested parties. It may be sounds like quadrature of the circle, but it is GETABEC's ensure that all the parameters, all the requirements are met.



The Mini

The smallest of our series of solid fuel fired boilers. Based on the fire-tube principle , this boiler is a working horse. Robust technology, simple but effective control technique makes this boiler to the ideal solution for the companies where the requirements of steam load, pressure and temperature is less demanding. The boiler has a large water volume and therefore can compensate easily the peak demands. The large steam room in the boiler ensure a dry steam supply and hardly any overflow. Steam dryer or steam receivers can be added to ensure that the operational requirements are met. Accompanying measures for energy savings and environmental protection will form a part of the solution package.

The Combi Solution

A combination of Fire-tube boiler and Water-tube boiler caters the steam demand up to 40 tons of steam per hour. The fireroom with the firing system is surrounded with membrane walls to absorb all the heat without much heat losses. The feed water will be heated up and already the water will start to evaporate. From here the water/ steam mixture flows into a Firetube boiler , where the actual steam generation takes place. The flue gas is also entering from the radiation part in the convection part before it will undergo a flue gas cleaning and than finally will enter the stack. With attached air preheater, to preheat the combustion air, and an Economizer, to pre-heat the feed water, we will be able to generate the maximum steam output.



The Big Boy

For a steam output of more than 40Ton of Steam per hour, we recommend the usage a 100% water-tube boiler, with the option of single drum or dual drum boiler. The GETABEC Boiler is a natural circulation boiler. With this design GETABEC boiler can generate up to 200 t/h steam per hour, produce superheated steam with a steam temperature up to 540C and a pressure of around 150 bar. Especially the single drum boiler is easy to install and requires little welding work on side and reduce the side work drastically. The boilers are delivered in modular construction. Like in all our products, GETABEC delivers also the adequate Energy Saving Package to meet the highest demands on efficiencies and environmental performance.

THE STEP GRATE FIRING SYSTEM

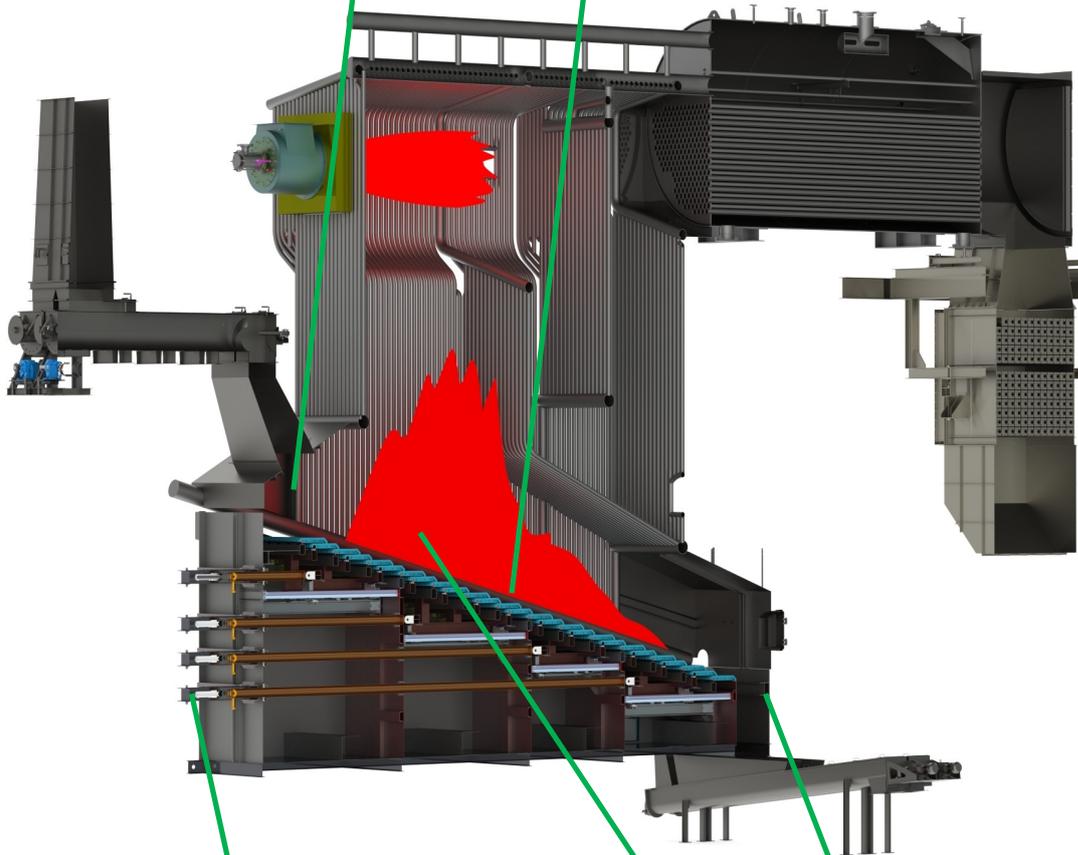


Intelligent Fuel Flow

Accurate fuel calculations are crucial to optimal energy and emission control. The advanced algorithms and PLC controller will automatically adjust with different fuels.

Grate Bar Elements

The grate bars chemical composition is custom designed for each type of fuel. This ensures a long lifetime of these components, leading to higher reliability.



Variable Hydraulics

The intelligent hydraulic system can automatically detect and adjust the system, as components wear out, thus it can maintain a very accurate fuel supply

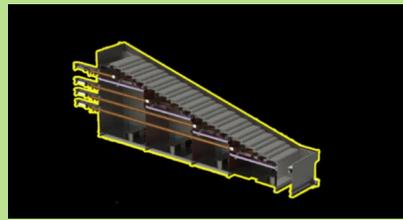
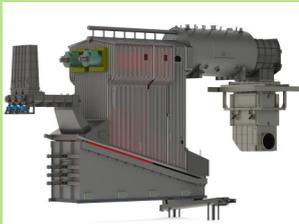
Combustion Zones

The Getabec control system monitors and adjust each step of the combustion process. It allows the full automatic adjustment for a large range of fuels.

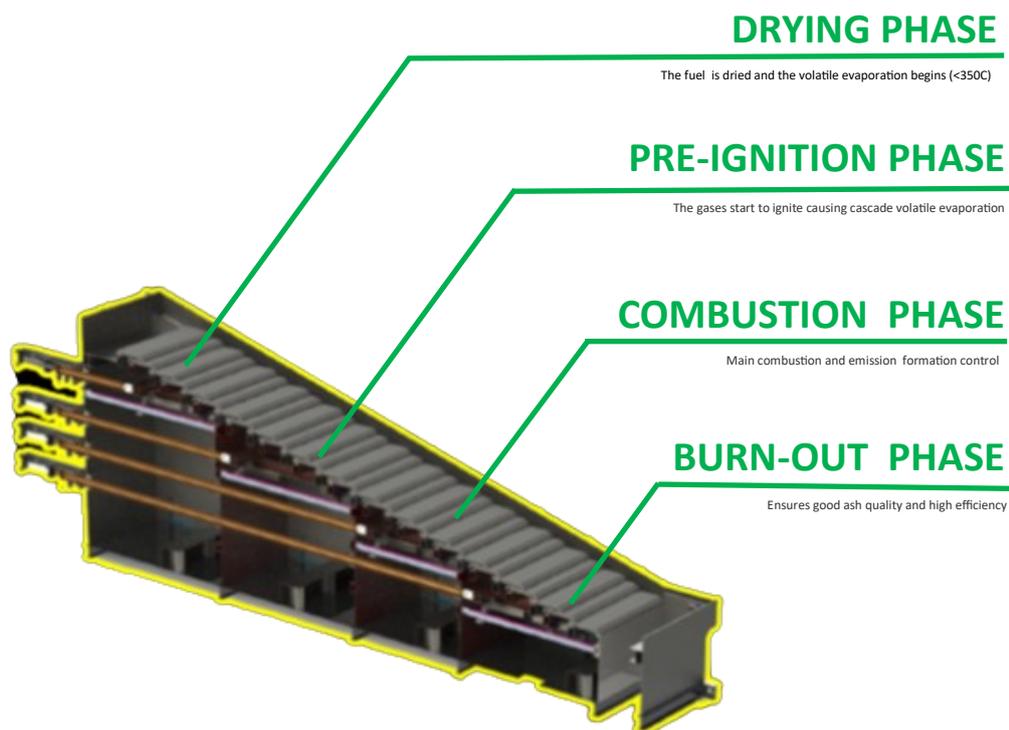
Good Ash Burnout

High quality ash can be sold as a commodity, giving an extra source of income. This grate give high fidelity control to produce quality ash results

THE COMBUSTION TECHNOLOGY



Today's environment requires a high degree of flexibility to choose the type of Biomass and other solid fuels. The GETABEC Dynamic Step Grate combustion technology combines flexibility with high efficiency. The GETABEC Dynamic Step Grate is designed with 4 combustion zones. Each zone is controlled independently to ensure the correct fuel / air ratio and the mechanical rotation of the fuel. This process will allow the highest possible efficiency of the combustion system.



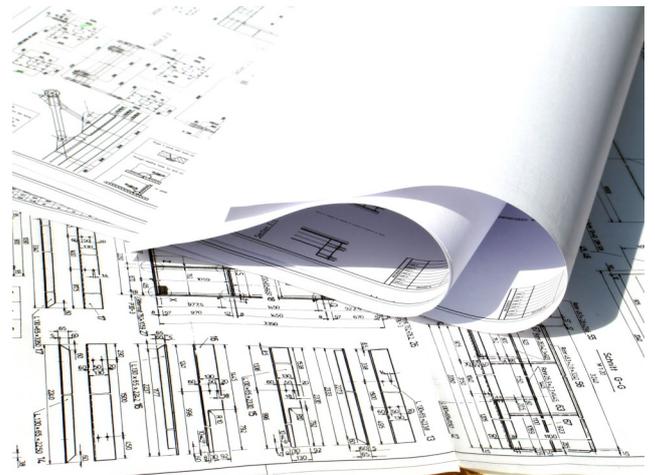
- Very stable fire control - perfect for many industrial applications
- Suitable for a very wide range of moisture, calorific value and size of fuel
- No unburnt fuel loss under the grate
- Unaffected by fuel and load fluctuations
- Rapid combustion throughout the fuel layer
- Easy automated and manual combustion management and fine tuning
- Very low unburnt carbon in fuel due to complete burn-out process
- No need for ash evacuation system under the grate
- High efficiency due to pinpoint accurate control of each stage of combustion
- High operating reliability
- Low maintenance requirements
- Simple and rapid installation
- Long lifetime with chromium alloy grate bars

THE GETABEC SOLUTION

Environmental friendliness is the governing concept in **GETABEC** using technologies which have been proven records in the world. We are using the services of technology provider from the world over to provide the state of art technology to our clients

Technologies and process are changing on a nearly daily basis. The laws the customer requirements are driving the requirements to provide environmental, safe but also economical feasible products to our more and more technology driven world. Customers sometimes feeling overwhelmed with the quantity and variation of products. How to select the best boiler? What is the environmental impact? What is the automation degree in the operation?

Questions which will be answered by the GETABEC Team. We offer the complete solution from planning to the selection of the boiler and other related equipment, from manufacturing and expediting, delivery and installation to commissioning and training. As the latest add on service we offer the **operation of the boiler plant** and/or the **supply of steam** to our client. GETABEC offer the all-around carefree solution



Complete Engineering Solution



Complete Project Management Solution



Complete Manufacturing Solution

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