

Clayton Heat recovery

Advantages

- › Low weight
- › Quality steam
- › Rapid response
- › Safety
- › Low maintenance
- › High efficiency
- › Small size
- › Unattended operation
- › Low blowdown
- › Fully automatic



The Clayton Heat recovery boiler has all the benefits of the Clayton Steam generator. The **small size and weight** is of particular advantage on heat recovery applications because the boiler can be installed very near to the heat source to become part of the exhaust ducting - and **many installation options are possible** with the Clayton design. In addition the Clayton Heat recovery boiler **does not need any type of fine** on the tube surface to assist heat transfer and this reduces the possibility of contamination from exhaust gas deposits. A sootblower is provided as standard and can operate while the boiler is running.



for Headquarters
Europe,
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Clayton
Exhaust gas boilers

Clayton Exhaust gas boiler

The Clayton Heat recovery boiler operates on the same tried and tested principle as the world famous Clayton Steam generator. It is therefore the most compact, efficient, responsive and safest means of producing **high quality steam** or hot water **from waste gas streams**.



Principle of operation

The Clayton Heat recovery boiler operates on **the principle of the forced circulation of water** through the helical coil. The boiler is installed in the waste gas heat source and feedwater is pumped through the coil in the opposite direction from the heating gasses by means of the specially designed Clayton Pump. The steam/water mixture from the outlet of the coil is then directed to the high efficiency Clayton centrifugal separator where **high quality steam** flows from the outlet. The **separated water is recycled back** to the hotwell. A feature of all Clayton systems is that dew point **corrosion is prevented** due to the preheated feedwater.

Several Clayton Heat recovery boilers can be connected together to operate simultaneously under automatic controls and many Clayton system designs have been developed to suit different industry and process applications.



The most compact, efficient, responsive and safest means of producing high quality steam or hot water from waste gas streams.



Construction

The Clayton Heat recovery boiler is of a simple modular construction which allows optimum heat transfer.

A range of standard coil sections have been developed to suit a wide variety of process conditions. The sections are chosen for optimum performance by computer program, based on the heat available, the steam output required and the allowable pressure drop.

Because of the modular construction of the Clayton Heat recovery boiler assembly is a straightforward procedure. The standard coil sections are connected together by flanges or encased in a welded outer shell. Coned transition pieces are then added at each end for connecting to the exhaust ducting. The water connections between each coil are usually located on the outside of the boiler shell.

Free energy

Surplus heat being expelled to atmosphere is no longer desirable or economical.

This **waste heat can be harnessed as a valuable source of energy using the Clayton Heat recovery boiler**.

This is a space saving and trouble free solution for producing steam or hot water for many years to come that is virtually free of charge.



Applications

The Clayton Heat recovery boiler can produce steam using the heat in the waste gases from diesel engines, small gas turbines, enamel ovens, stress relieving ovens and other suitable applications including high temperature processes such as heat from thermal oxidisers.

On land and marine installations the Clayton Heat recovery boiler has been used extensively for over 40 years to recover heat from the exhaust of propulsion and power generating diesel, gas and heavy fuel oil engines. Engines on electrical generators of sizes up to 15 MW are ideal for heat recovery using the Clayton Heat recovery boiler.

