Clayton Steam generator

Advantages

The forced circulation helical coil design concept of the Clayton Steam generator produces outstanding benefits to the user.

High efficiency
Very high efficiency is the most obvious benefit that comes from small sizes because of low radiation and convection heat losses. In addition heat flow is in the opposite direction to the water flow through the coil and this counterflow principle optimises heat transfer which results in low running costs.

Small size
Compact design means that minimal space is required for a complete Clayton boiler house. For a new installation building costs are reduced and in an existing factory a Clayton system can easily be fitted into the available area and the low weight even permits location on an upper floor level.

Rapid Start
Start up from a completely cold condition is five minutes. The warm up fuel is minimised and the unit can be switched off when the operator leaves at the end of the working day. The Clayton Steam generator is therefore also ideal when used as an auxiliary or standby boiler.

Safety
It is not possible to have a steam explosion. This is a danger associated with low water level in other types of boiler that store a large volume of hot water. The Clayton Steam generator does not have a water level and does not store a large volume of water so the danger is completely eliminated.

High Quality Steam
Steam quality is the best available from any type of boiler and is at least 99.5% dry saturated at all steam loads. This reduces the amount of water and impurities going into the process and ensures higher energy content of the process steam.

Rapid Response
Extremely rapid response to changes in the demand for steam is inherent in the forced circulation design. A Clayton Steam generator will speedily ramp up and run at maximum steam output continuously without faltering.

Low Blowdown
Blowdown which is necessary to prevent the build up of impurities in all boiler systems is extremely small with the Clayton design. This saves fuel, saves chemicals and saves water.

Fully Automatic
The rapid start and rapid response can be controlled automatically. All Clayton systems can be started by a single switch locally or remotely just like any modern advanced machinery.

Unattended Opeation
Because of the inherent safety and automatic systems all Clayton Steam generators can be supplied to run without operator attendance for up to a period of one week.

Low Maintenance
One of the practical benefits of the simple design concept is that maintenance requirements are minimal. In addition all of the components have been developed and improved over many years to make the Clayton Steam generator the most reliable steam boiler available today

Clayton
INNOVATIVE STEAM SYSTEM SOLUTIONS

for Headquarters Europe, Middle East & Africa

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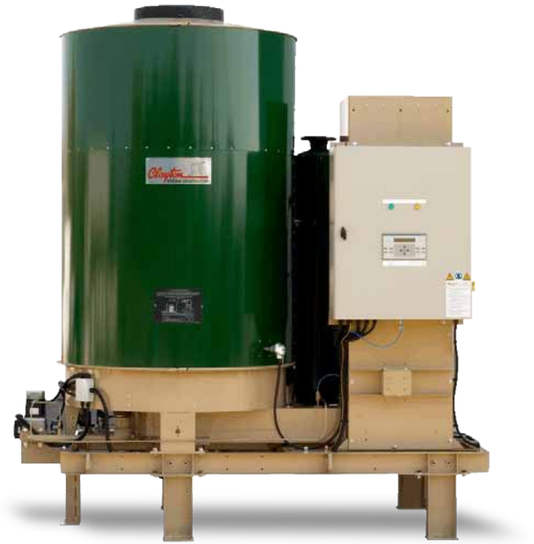

Clayton Steam generators

Clayton Steam generator

Steam generators

Clayton Steam generator

The high powered Clayton Steam generator is the world's most compact, efficient, responsive and safest means of producing high quality steam.

The Clayton Steam generator has been continually developed **since 1930** and is very different from the traditional firetube boiler design that is the familiar steam train boiler image of the past. In a firetube boiler a large amount of water and steel is heated to produce steam. In the Clayton Steam generator a **small amount of water and steel is heated to produce steam.**

The basic design concept results in a steam making machine with staggering advantages for today's world. The Clayton Steam generator is **the best steam boiler available for all steam applications** and is the preferred choice of professional thermodynamic engineers as well as many of the world's forward looking companies and institutions who use steam in their production or processes.

Principle of operation

The basic principle of operation of the Clayton Steam generator is both ingenious and simple.

Water is pumped through the inside of a small diameter heated coiled tube so that **cold water goes in one end and high pressure steam comes out of the other.**

The Clayton Steam generator uses only three main components and these have been specially designed for the purpose.

The boiler feedwater is pumped by means of **a specially designed Clayton Pump** that forces the water through the Clayton single continuous helical heating coil.

From the outlet of the coil the stream is directed to a high efficiency Clayton **centrifugal Separator.**

This forced circulation **helical coil** concept produces steam that is almost completely dry saturated**.** The separated water is always recycled in the Clayton Steam generator system.

Tailor made to suit your company needs

Multiple steam systems

Multiple steam systems

Steam systems

Clayton Steam Systems design the most compact, reliable and efficient steam plant available today and are flexible enough to be supplied in many different forms.

- **Containerised boiler house**
- **Skid-packaged systems**
- **Mobile Units**
- **Multiple Systems**
- **Offshore Versions**
- **Marine Specifications**
- **Turnkey Installations**

These are exciting times for Clayton Steam Systems since many new applications are being demanded worldwide and the Clayton technology is being used for emerging applications where outdated equipment is no longer suitable for the modern world.

Containerised boiler house

Skid-packaged Systems

Available models

The range of Clayton Steam generators is being constantly developed and expanded. As well as special designs Clayton has a range of standard steam generators to suit most applications.

STANDARD MODELS
E10 TO E2004

SUPER EFFICIENT MODELS
SE SSE SSSE

RATINGS
100 kW to 20MW

OUTPUTS
150 to 32,000 kg/h

PRESSURES
Up to 200 barg

TEMPERATURES
Saturated & Superheated

Clayton INNOVATIVE STEAM SYSTEM SOLUTIONS

SAVES FUEL - SAVES SPACE - SAVES TIME - SAVES MONEY