HOT AIR & GAS GENERATORS

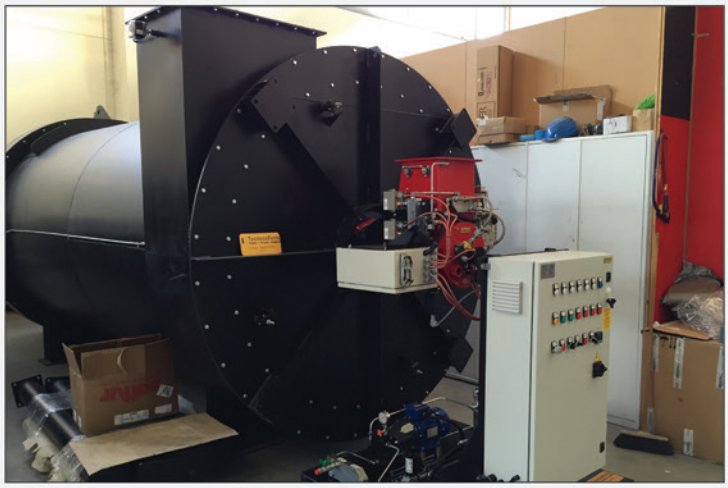
HAG
HGG

TecnecoForni
ecology and energy recovery

Tecflam
burners and thermal machines

HOT AIR GENERATORS

TECFLAM acquired the TECNECOFORNI brand who is involved in the design and manufacturing of Hot Air Generators (HAG) and Hot Gas Generators (HGG), which are suitable for applications in many industrial fields such as bricks manufacturing, chemical industry, food industry, mineral grinding, and milling plants. The Generators are of different models and sizes specially designed for the necessities of the clients.



HEAT TRANSFER

1. Direct Generators HGG: if the combustion fumes are mixed with the process air
2. Indirect Generators HAG: if the combustion fumes are separate from the process air and the heat is transferred through a steel plate

BURNER TYPE

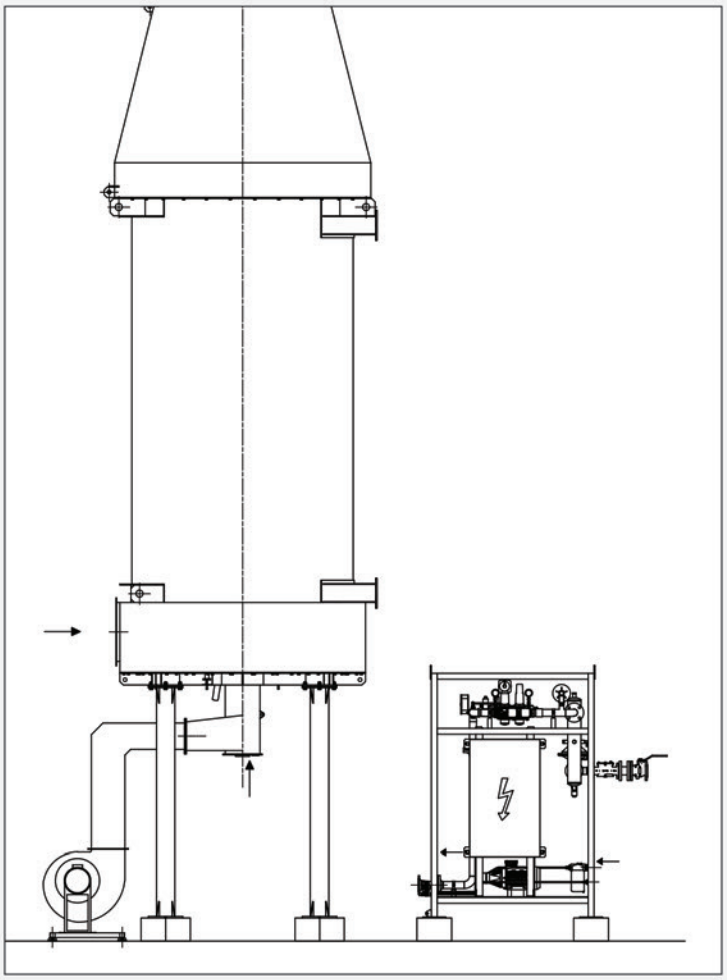
1. Gas burners (natural gas or LPG)
2. Liquid burners (diesel or heavy oil)

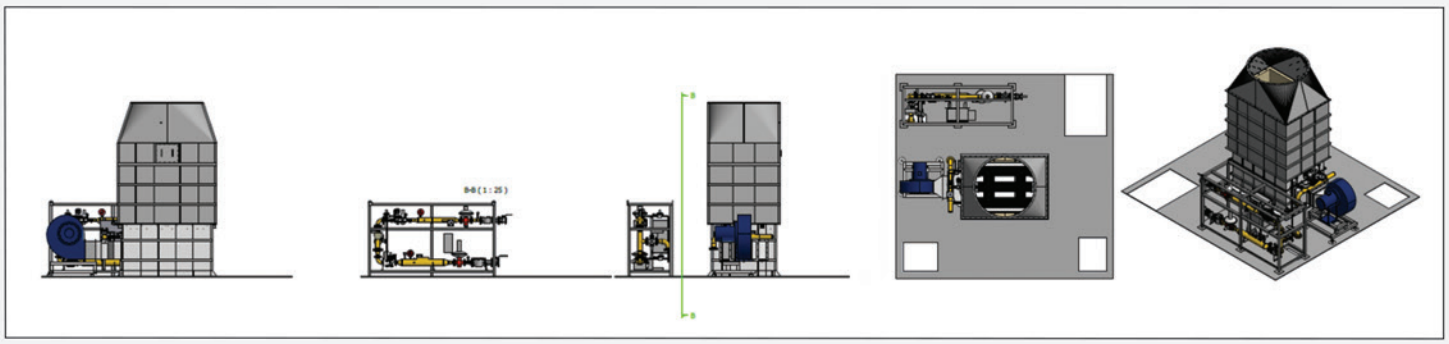
TECHNICAL CHARACTERISTICS

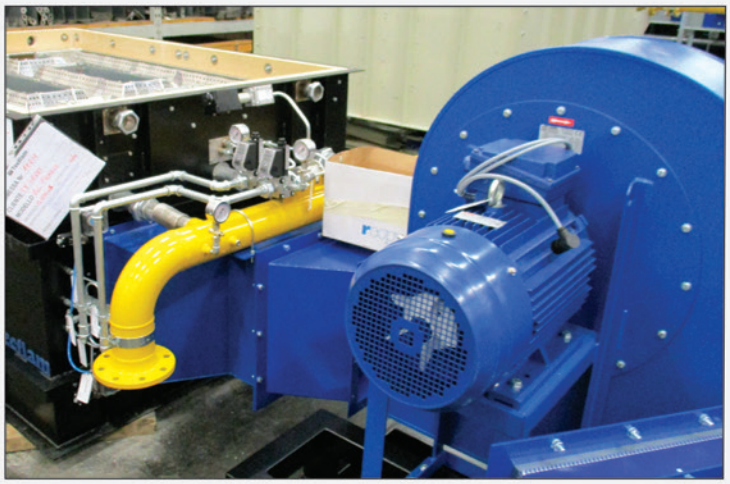
The hot air temperature could be from 80 until 550°C for indirect type and 1.000°C for direct type.
Thermal power range: until 2.500 kW for indirect type and 24.000 kW for direct type.
They could operate "aspirated": it means the process air enters from one side (burner side generally) of the Generator aspirated from the dryer's blower or they are "pressurized": it means the air is pushed inside the Generator by a fan.
They can be equipped with a burner prepared for multi-fuel supply (for example Natural Gas or L.P.G., Light Oil, Heavy Oil).

DIRECT GENERATORS - HGG

They can be of two categories depending on the type of burner.
When the burner is of the air duct type we construct the generator as a complete crossing, that is the process air and the combustion fumes are mixed directly in the combustion chamber.
The construction can include internal or alternatively external coating.
When the burner is of the traditional type we construct a generator that provides a concentric external structure with the combustion chamber.
Generally the construction requires internal coating in refractory material where the burner flame can develop.
Between the external structure of the generator and the interior combustion chamber we have a space for the passage of process air. The process air also has the function of "cooling" the combustion chamber both internally and externally.
At the end of the Generator the combustion fumes and process air are mixed together.
These can be designed either in horizontal or vertical axis.







INDIRECT GENERATORS - HAG

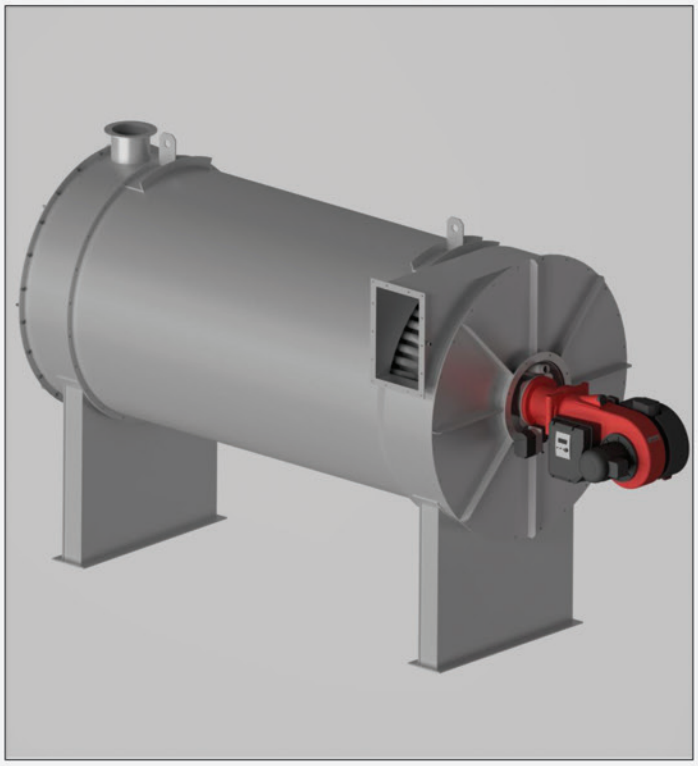
These are used to heat the process air without coming in contact with the combustion fumes.

Our technical solution consists of:

1. combustion chamber, where the burner flame develops and the fumes are reversed to be discharged;
2. concentric shell tube in which the combustion fumes flow internally. The tubes are connected on the opposite side to a circular collector from which combustion fumes are discharged;
3. the collector has the function of "collecting" all the fumes coming from the tubes, before being expelled from the chimney;
4. the external structure of the heat generator, cylindrical and coaxial with the combustion chamber and shell tube, has the purpose of containing the process air that is heated by crossing both the interior combustion chamber and the entire shell tube;
5. externally the generators are insulated with mineral fibre and sheet coating. Usually the total thickness of the coating is 100 mm.

The heat generator is completely isostatic; which means the different parts, with different temperatures, are free to extend themselves independently one from the other.
It's possible to clean the inside of the tubes by dismounting the thermal insulation, on the fumes side and then removing the bolted covers.
On the opposite side, it is possible to enter in the combustion chamber by dismounting the support which carries the burner.

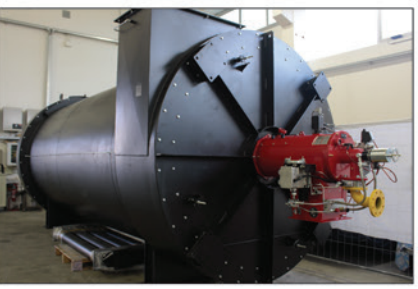
These can be designed either in horizontal or vertical axis.

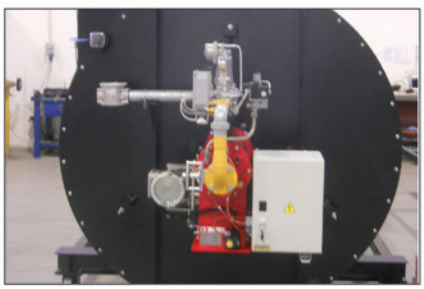


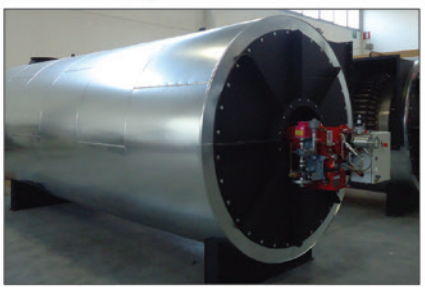
SERVICE

Because the generator is the beating heart of the plant it is necessary to have an after sales service network. Tecflam is continuously expanding this network both in Italy and abroad so as to provide this fundamental service to all end users.

Other than our technical service centre, Tecneco, a subsidiary of Tecflam, which is ready to intervene directly from our headquarters in Italy, we also have as of today many service centers spread all over Europe:







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