

GAS – INFRA-RED CERAMIC TILE BURNER, Type AK 4

1. Problem

The drying of textiles, technical fabrics, non-wovens, membranes, bulk solids, building materials, coatings as powder coatings, water-based dispersions and much more requires most different characteristics of a drying plant. How is it possible to make a product at the same high quality using a more effective and energy saving drying?

2. Solution

GoGaS' programme of supply includes a gas-fired, medium wave infra-red burner which was especially developed for the industrial application. By assembling those burners the customer gets an homogeneous radiation area (fig. 1) of almost any length and width.

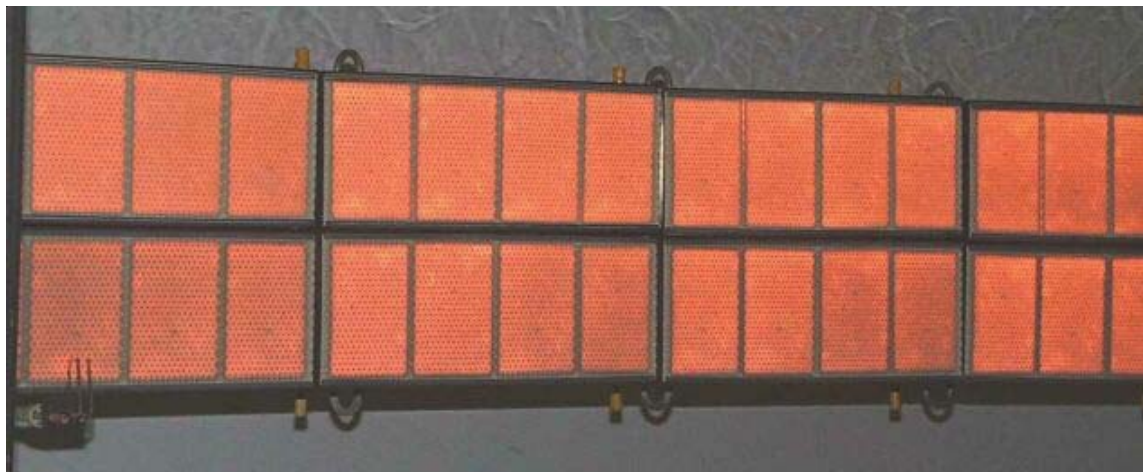


Figure 1

The burner AK 4 is operated with combustion air blower (for forced air operation) (fig. 2). The controlled supply of combustion air and gas allows a higher surface temperature and therefore a higher thermal surface load compared to atmospheric gas infra-red burners. Furthermore a more precise adjustment of capacity in a range of 50 – 100 %, referred to gas consumption, is possible.

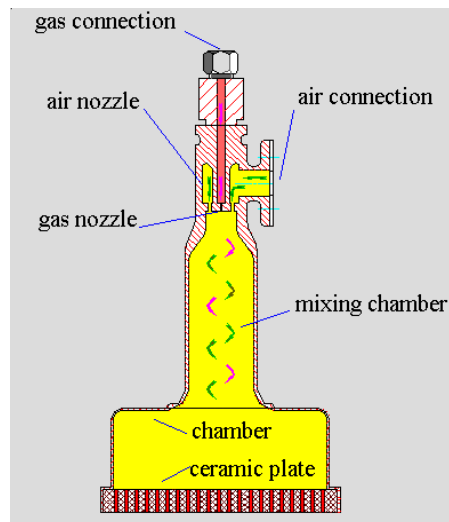


figure 2

The ceramic tile burner AK 4 reaches a surface temperature of 950 °C for a very long lifetime. This corresponds to a thermal surface load of approx. 120 kW/m².



figure 3

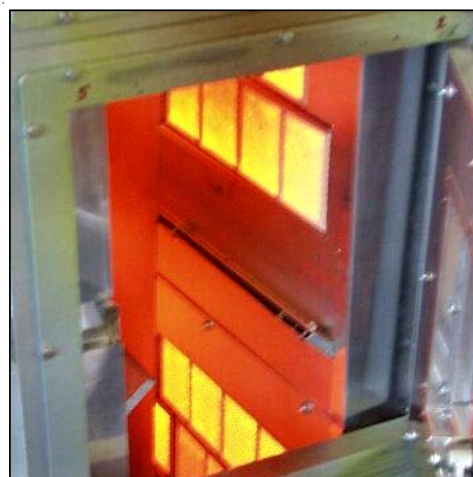


figure 4

Fig. 3 and 4: Installation example and operation of a manufactured drying plant for web shaped materials.

Figure 5 shows a possible installation example with hot air circulation to improve energy efficiency.

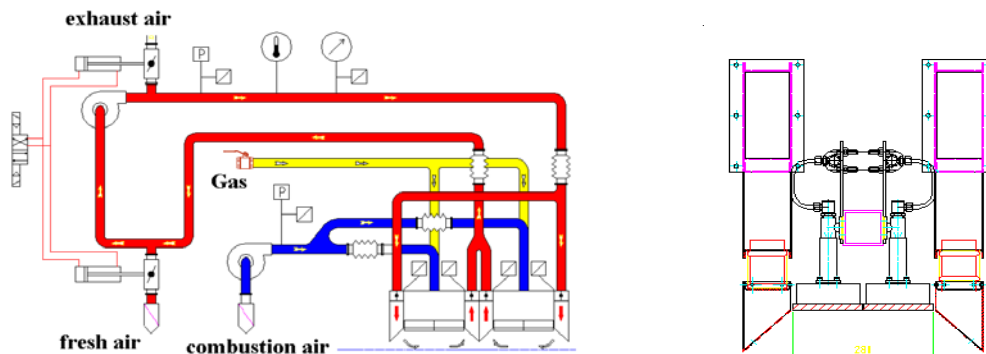


Figure 5

3. Advantages

- Rigid industrial execution with corrosion proof combustion chamber
- Adaptability in width and residence time is possible during operation
- Quick heating up and cooling down
- Combustion with low emission
- Insensitive to dirt due to fresh air filtering and over-pressure
- Exhaust air system for effective removal of vapour

4. Benefits

- Small energy consumption by high efficiency
- Low operating costs by using gas
- Long lifetime compared to electrical gas infra-red burners
- High evaporation capacity
- Low spare part costs
- High usability factor