

# STALAM



## “RF” PASTEURISATION

포장 음식의  
"RF" 저온 살균

OF PACKAGED FOOD

Pasteurisation is a relatively gentle heat treatment carried out at temperatures below the boiling point of water, having the aim of destroying pathogenic organisms having public health significance and extending the shelf-life of food from the microbial and enzymatic points of view, causing limited degradation of organoleptic and nutritional properties of the product.



“ARF 60 kW” pasteuriser for fresh filled egg-pasta and “gnocchi” in commercial packaging (flow-pack film).

“ARF 2x40 kW” pasteurising equipment with cooler for fresh semolina pasta.

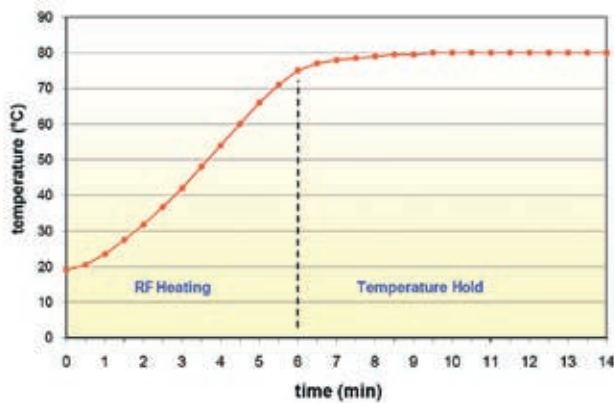


STALAM is the first company worldwide having developed industrial pasteurising equipment by Radio Frequency (RF) heating for packaged products such as fresh pasta, gnocchi, bread loaves, etc.

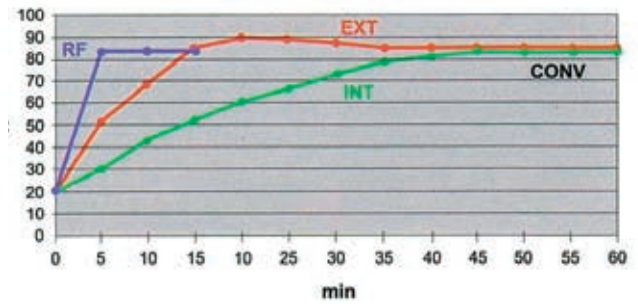
In the STALAM “ARF” pasteurisation system the heat treatment is carried out in three stages:

- superficial pre-heating of the packaging by conventional heat
- rapid heating of the product by RF at 27.12 MHz
- temperature “hold” section by conventional heat

The whole treatment ensures that the product and its packaging are brought quickly and uniformly to, and hold for the time sufficient to achieve the desired bacteria kill level, temperatures in the range of 76-82°C. The entire pasteurisation process takes usually no more than 10 to 20 minutes.



Typical temperature curve of fresh filled pasta submitted to the "ARF" pasteurisation process.



Difference in the temperature curves between the "ARF" and the conventional pasteurisation methods.

## BENEFITS OF THE STALAM "ARF" PASTEURISATION SYSTEM

The technical and economical advantages derived from the adoption of STALAM's "ARF" pasteurisation technology are considerable:

- high reduction of the microbe load is achieved in a very short time, thanks to the fast and uniform heating process throughout the product and its packaging, which does not rely on (slow) heat transmission phenomena typical of conventional methods: the required microbe kill level is achieved in a few minutes rather than 1 h or more;
- the process speed and uniformity minimise the risk of product degradations (especially the deterioration of organoleptic, chemical and physical characteristics), thus helping to preserve at best the product quality and freshness, especially in the case of heat-sensitive products;
- thanks to the high process speed, radio frequency pasteurisation can be carried out continuously, with significant logistics advantages in product handling and production scheduling;
- considerable energy savings can be achieved, thanks to the fast and selective heating process carried out by the RF field, which transfers the energy directly into the product without losses in the surrounding ambient;
- the "ARF" equipment require less floor space compared to the traditional systems, for the same production output.



RF pasteurisation of flow-packed bread loaves (sliced toast bread) inside cardboard boxes for retail distribution.

# STALAM

STALAM S.p.A. - Via dell'Olmo, 7 (Z.I.) - 36055 NOVE (VI) - Italy  
 tel. +39.0424.597400 - fax +39.0424.590722  
 Email: stalam@stalam.com - Web: www.stalam.com