

Radio-frequency heating delivers results.

An innovative method for the in-line, continuous heating of meat products, using radio frequency technology is now available. According to Herbert Sonder, the inventor of the new heating system, and his business partner Dick Wink, RF Food Systems, the technology represents a big breakthrough in the meat products industry.

"Traditional heating methods are inefficient," explains Sonder. "If you use steam for heating, a great deal of heat is wasted in these processes."

Radio frequency RF heating is the solution, Sonder explains. "RF

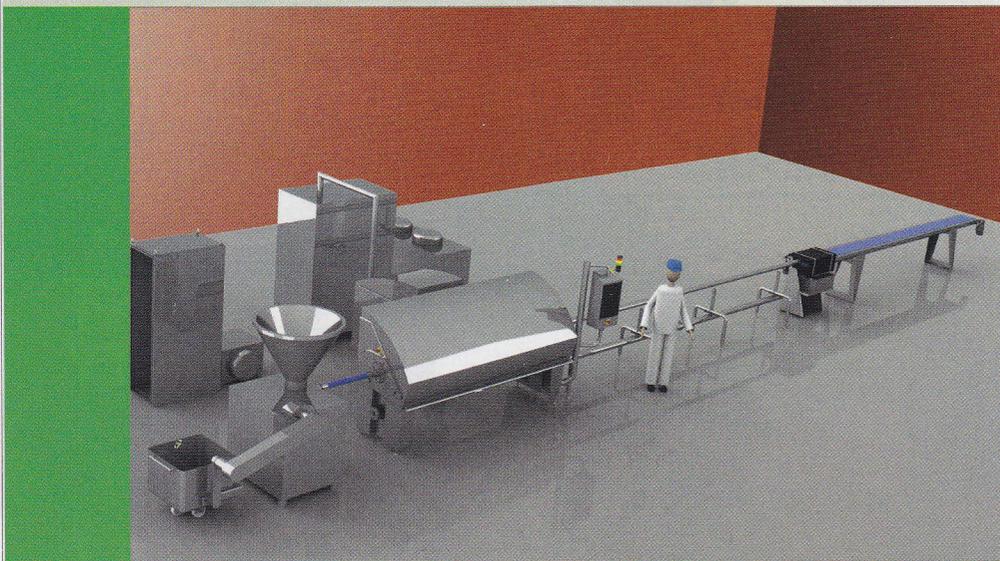
higher efficiency and yield savings in energy and labor consumption and the use of ingredients. RF radiation allows heating rates of 5-10 degrees C per second to be achieved. That is much faster than other methods. Secondly, the process can be very precisely controlled, cutting processing times and ensuring uniform quality."

RF heating also offers substantial environ-

mental benefits. "The machine is very energy-efficient. An RF installation does not use any fossil fuel, just electrical energy. This makes it possible to use it in a stand-alone set-up, since there is no need for a boiler-house. Investment costs can be reduced. Another big advantage is that RF technology allows you to switch from batch to continuous production," says Wink. Finally, an RF installation takes up less space than a traditional system. The machine is noiseless and supports a CIP (clean-in-place) system. The technology offers big Health & Safety benefits: heating is localised where it is needed and the machine is less labor-inten-



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waves have a frequency of between 3 and 50 Mhz. They cause the molecules in a product to oscillate, thus generating heat. Unlike microwaves, they heat the product homogeneously from inside; they have a penetration depth of from 5 to 7 centimeters. That means that RF heating works well and uniformly for products with a diameter of up to 14 cm."

Applications

Cooked sausage and meat products

RF technology has been used with great success in the production of cooked meat products. Savings are achieved in energy consumption, labor costs and the costs of ingredients, without detriment to the flavor and the storage and slicing properties.

Convenience food, snacks and toppings

RF technology is ideal for use in the convenience food and snacks sectors, including the production of toppings for pizzas and ready-to-eat meals and the in-line preparation of meatballs and similar products. The ability to use a stand-alone installation for such purposes is an extra benefit.

Benefits of RF heating technology

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Investment and payback time

RF installations can be delivered in capacities ranging from 200 to 9,000 kg per hour. While the investment varies according to the type of system, it can be recovered in less than two years. "RF technologies will become well established in the food industry in the next few years, both when companies need to replace a new system and when they want to replace an existing one," says Wink.

Pilot installation

Visits can be arranged to a working RF installation in the town of Borculo. In addition, RF Food Systems can install a pilot system on the premises of companies that are seriously interested in acquiring this new technology.

RF Food Systems has close links with a renowned mechanical engineering company for the construction, installation, start-up and servicing of these RF heating systems.

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