

Cooking Products



for the New Millennium

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It has often been a mystery to me that our industry is somewhat reluctant to embrace new cost-efficient cooking technologies. Prior to writing this article, I was searching for just the right way of helping foodservice operators recognize the power of new cooking technologies in their businesses. Recently I toured a major equipment manufacturer's plant. I was talking with the owner about the dilemma I was having writing this article. I asked him to visualize the manufacturing of food equipment, as parallel to a chef or cook manufacturing food.

To generate some discussion, I said, "In your plant, for example, you probably have a piece of equipment that automatically punches and die-stamps all of your stainless instead of doing it the old way with presses, shears, and punches." He said they "used to have an old machine like that, but it was too slow, and labor-intensive." They "now have a Plasma arc cutting machine, because they only need one person instead of two to operate it, they get more cuts out of a piece of stainless steel (less waste), it is safer, every cut is burr free, it stays calibrated for the duration of a batch, it is quieter, and it lasts longer."

That was precisely the point I wanted to make. New technologies, robotics and automation have improved performance, productivity and profitability for the manufacturer, and they can do exactly the same thing for any foodservice operation. Manufacturers use the term "Keisen" for this, which means continual process improvement.

The last several decades have produced many radical new technologies that will forever change the way food is cooked. Those operators who are willing to explore these new technologies will discover economic advantages, improved efficiencies and superior productivity. They will no longer be compelled to slave over hot ranges preparing food for their customers. Most of these new technologies are available and affordable, ready to improve the operator's processes and bottom line profitability.

It has been my observation that there are three types of foodservice customers.

Pioneers – Businesses that quickly analyze the value benefit of a new technology and seize the advantage over their competition. These operators are known as "early adopters" or "risk takers."

Settlers – Tend to be businesses that are "risk averse" and wait

until others have embraced a new technology before they risk their process to change.

Traditionalists – Businesses that are comfortable with the status quo. They are reluctant to adopt, or never adopt change. Most of them go out of business, because they can no longer compete.

An example of this would be the pizza revolution of the early 80s. Domino's discovered a new technology called a conveyorized pizza oven. This oven optimizes labor, provides unparalleled consistency, and dramatically increases productivity. Domino's was a pioneer! They rolled out their pizza units with conveyor ovens all over the world, leaving their competition in the dust. Several other chain operations soon emerged as settlers with similar automation, and were able to claim a share of the market. The traditionalists stuck with their old hearth-type deck ovens and lost market share. In order for these types of operations to survive, they must charge higher prices for the product and provide value-added service.

In the 90s we saw the emergence of the "top-side" or "clam-shell" griddle that gave chain burger operations production advantage over their competition. They cooked burgers from the top and bottom at the same time. This helped them increase same-store profits, improve taste, quality, and consistency and reduce unnecessary labor costs.

These are examples of process improvements, which translate to increased productivity and food quality. There are many cooking appliances in existence today that may have been around for several years, but they are yet undiscovered by foodservice operators. It's hard for a customer who sees a piece of cooking equipment at a trade show to fully appreciate and understand how it could improve their bottom line. If you are not looking for a solution, or do not recognize a problem, you will not be aware of the extraordinary benefits of some of these revolutionary cooking items.

The following is a thumbnail on some of these technologies that may help your processes:

Combination Ovens – These ovens are capable of cooking in dry-heat only, steam only, or a combination of both. This piece of equipment is 25-year-old technology, but the average operator is just beginning to understand the speed, quality and consistency it will afford them. Combis will cook most foods in less than half the

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time of a normal convection oven. Rational has just introduced a totally self-cleaning unit. With the push of a button, a spray arm automatically sprays degreasing agent on the inside of the oven, then following an appropriate soaking time, rinses it clean.

2600 Watt Microwave Oven – Several manufacturers offer 2600-plus watt models. Panasonic calls their version the Sonic Steamer®. This is a 2600-watt microwave oven that will steam anything in its own juices in a fraction of the time of a convection steamer. It holds two 4 inch deep full-size plastic steam table pans. Either of these units will put stock pot cooking on the range out of business. As an example of its speed: 30 servings of mixed vegetable medley raw to done in 2 minutes; 6 pounds of shrimp in 3 minutes; 2 gallons of whole kernel corn in less than 6 minutes. The added benefit is that all food is cooked in the same pan from which it is served.

Combination Braising Pan/Steamer – Legion recently introduced a combination braising pan/steamer unit called a Skittle®. This all-in-one unit can perform seven cooking functions in the same floor space. It adds great flexibility to the cooking line because it can be used to braise, boil, poach, stew, steam, fry and grill. This versatility can smooth out a cooking line by providing the additional functionality when needed.

Convection Microwaves – Combination microwave/convection ovens are the perfect answer for food in a hurry. They combine the power of microwave with the speed of a convection oven. As an example of their speed: frozen pizzas, 1-1/2 minutes; beef pot pie, 3 minutes; 6 ounce chicken breast, 4 minutes. This oven is just right for any operation that would like to prepare food in small batches over a long period of time. This oven can put a pub, speed line or a c-store in the food preparation business quickly. Hors d'oeuvres, wings and potato skins can add significant profits to an existing business.

Light Wave Ovens – These ovens use quartz lamps to produce intense heat quickly and cook with blinding speed. Like the convection microwaves, these ovens are designed to cook the same type food products as described previously. They caramelize the product beautifully.

Vacuum Steamer – This unit is a water bath type steamer that is designed to operate at lower than atmospheric pressure. Water normally changes to steam at 212 degrees at sea level; this unit steams with water temperatures as low as 175 degrees. Obviously, steaming with lower temperatures is a huge energy saver; also, these units use less than 6 gallons vs. 600-plus gallons of water per day with conventional convection steamers. An added benefit of this unit is that a pan of finished food can remain in the steamer while another pan of uncooked food is being cooked. These steamers can be placed anywhere and don't require a water or drain connection.

Steam Griddles – There are several varieties of steam griddles. Accutemp manufactures a griddle that has a plate surface

temperature of less than 2 degrees variance at any point on the plate. This is a radical new technology and is especially beneficial in the quality and consistency of food doneness and color. The other steam griddle is manufactured by Thermodyne and employs a standard griddle plate with several domed lids and a steam injection system. This griddle actually bathes the product in live steam at the same time grilling the side that is in contact with the griddle plate. These griddles have extremely high rates of recovery and will turn out large volumes of food.

New Technology Fryers – Many electric fryers today use firebar elements, which are flat, or large-diameter round elements. These provide a much greater surface area in contact with the oil. Recovery is almost twice as fast as tube-fired gas units. One manufacturer, Frymaster, has gone one step further; they insulate the fry pot and use a unique controller called a Triac. The Triac modulates power to the oil rather than being full on or full off.

Oil-less Fryers – Oil-less fryers are also known as air fryers. They use high-velocity superheated air to actually cause the oil coating on the product to get hot enough to fry. These units do not require exhaust hoods and can be placed almost anywhere. These units are ideal for bars and c-stores. Like the light wave ovens, these units can prepare hors d'oeuvres and almost any item that has been blanched in oil.

Ventless Hoods – Ventless hoods are self-contained units that do not require an exhaust duct to the outside. They utilize a series of filters followed by an activated charcoal filter to remove grease particles and odor from the air. They can be used over electrically heated appliances only. These hoods have built-in fire protection systems.

Self-Contained Ventless Fryer – One manufacturer makes a self-contained fryer that is a standard 15# electric fryer inside and enclosed ventless hood with fire suppression system. This unit offers the benefit of traditional deep fat frying with the ability to place this unit anywhere.

Induction range – Induction ranges cook with disturbed magnetic fields heating only the pan in which the food is being cooked. The pan must be made of a material that a magnet will stick to. These are ideal for any buffet or pasta operation.

Thermal Finisher – These are rapid food warmers that pre-heat in less than 3 seconds and will toast, melt and finish foods like nachos in 60 seconds, potato skins in 45 seconds and par baked pizza in 60 seconds.

Perhaps this information will encourage you to examine and modernize your operation. Possibly one of these technologies can smooth out or fix one of your operational bottlenecks. Maybe you too will be able to say, "We used to cook our food that old, slow, inefficient way, but now we have a new technology that is truly state-of-the-art".