FSTC GREEN SHEET

THE TECHNOLOGY TRAIL: Are We There Yet

On the surface, it's hard to imagine two spaces that are any more different than an Apple Store™ and a restaurant supply store. The Apple Store™ is stocked with an expanding kaleidoscope of products that are evolving at an incredible rate while the restaurant supply house, like the typical restaurant kitchen, looks very much like it did a half century ago. Of course there is a reason behind this difference; an oven is a hundred times more expensive than an iPod™ and a restaurant kitchen can't be rebooted at the touch of a button. In other words, technology costs a lot more in the kitchen and a system "crash" is simply unacceptable. Technological advances in the commercial kitchen have to be innovative, practical, and robust – a big challenge! You can see why food service might lag behind on the technology trail and yet, a closer look reveals a quiet revolution within the industry. The engineers at the Food Service Technology Center have a great inside view of innovation within the kitchen and what we see is a steady and growing trend towards ever more sophisticated appliances and controls. Some of these improvements are flashy and unique and some are simply hard fought improvements to standard workhorses of the commercial cookline. Want a taste of the inside scoop? Here's a sample of some of the innovations that are helping to move the kitchen into the 21st century.

CUTTING THE HOT AIR

Right up front on the list of most promising emerging technologies is "demand controlled" kitchen ventilation. Here's the problem with your kitchen exhaust hood: it runs full blast all the time whether you're cooking or not! Demand control is a practical way to overcome this limitation. Using a combination of sensors, variable-speed motors and computer controls, this system speeds up the exhaust fans when your cookline is in production mode and slows the fans down as the line moves from busy to standby. Slowing down your fans saves you money on fan energy (both exhaust and makeup air fans), your kitchen heating bill, and air conditioning (if that applies). The big bonus is a much quieter kitchen when the fans are on low speed. Melink, the primary manufacturer and leader in this field, has a great animated explanation on their website at www.melinkcorp.com/intellihood_animation.htm.

SQUEEZING THE BTUS

Several manufacturers, responding to their clients' calls for high-performance energyefficient appliances, have released next generation cooking equipment that squeezes ever more BTUs out of the valuable gas and electricity that passes thru the meter. For example, there are high-efficiency fryers that can cook more pounds of food per hour than the basic industry-standard models while using much less energy. These units cost about half as much to operate as the standard models. The highest efficiency fryer achieves its performance based primarily on a simple and clever rethinking of the heat exchanger. This type of technology may not be as splashy as the nano™ but it is a remarkable improvement in a very popular cooking platform. Similar improvements are showing up in griddles, ovens, steamers, and other cookline standards. Not to be outdone, ice machine and refrigeration manufacturers are studying their products and creating better widgets. Manufacturers are making these strides in technology because operators for you, the end user, to know which appliances are truly efficient. How will you buy it if you can't find it to begin with? To that end, California utilities have started an incentive program to guide you to those high-tech energy winners. The list of must-have appliances is only a click away on the Internet at www.fishnick.com/saveenergy/rebates/.

TRULY FAST FOOD

"Hybrid" is the catchphrase for high-tech in the auto industry and hybrid is also the cutting edge in food service as represented by the super-high-speed "rapid cook" ovens. Packed with computer components and horsepower to spare, these ovens typically employ a combination of heating technologies, for instance microwave and convection, in a small, countertop package. The concept is to cook pizzas, sandwiches, and other small portions as fast as possible. Subway was the first chain to implement this technology system-wide and Starbucks is in the process of adding these ovens to their stores. This is an excellent way to add production capacity to a kitchen without using much space.

TOTALLY UNDER CONTROL

Another hybrid oven that is changing the commercial kitchen is the combination oven steamer. This technology has been available in the marketplace for over a decade but recent enhancements to the controls on these units make them truly space age. You tell the oven how you want the food cooked and when you need it. The oven's controls take care of all the temperature and humidity settings. These advanced ovens are also more energy efficient since the onboard computer tightly organizes the cook cycles, reducing energy waste. In the US, "combis" are primarily specified by institutional customers but these high-end ovens are also finding homes in fine dining as well as supermarket kitchens.

ON THE ROAD

Variable speed drives, high-efficiency heat transfer, digital controls and hybridization – just three examples of technologies that are changing the commercial kitchen. A full list would also include innovations in sanitation, hot water heating, refrigeration, exhaust hoods, lighting, and building systems – pretty much everywhere in the restaurant. There is a subtle but perceptible shift in the food service industry – we've started down the technology trail and we're picking up speed. It's going to be a great ride!

These energy saving tips are offered by the Food Service Technology Center (FSTC), an unbiased food service resource center located in San Ramon, CA and funded by California utility ratepayers under the auspices of the California Public Utilities Commission. For more information on the FSTC and for our schedule of free energy efficiency seminars, please visit our website at www.Fishnick.com.