

Turn the Table on



Low Productivity!

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Productivity is one of the most important aspects and functions in the foodservice industry today. Productivity leads directly to profitability; therefore, foodservice operators demand the most efficient, highest recovery, and most reliable cooking equipment they can employ. Historically, the restaurateur has used table turn, or the number of meals served, as one of the key indicators of efficiency. The problem with this measurement is that it reflects what happened in the dining room during a meal period, and not what happened in the kitchen. Table turn could be a false indicator, because not every available seat is necessarily filled to capacity during meal periods. If the kitchen were able to operate at maximum productivity, then customers would be served more quickly, and the net effect is the production of more meals per minute, yielding greater revenue. Foodservice operators need to turn the tables on low productivity.

Many foodservice operators are not aware that there are actual production differences between similar equipment items. This in part is not the fault of the operator, because manufacturers don't publish a certified productivity rating of their product lines on their cut sheets. It is very difficult for the buyer to compare and contrast the differences between equipment items without this data. It would be extremely beneficial if the cooking equipment being considered for purchase had a productivity rating, so you would know how many pounds of product per minute or hour it is capable of producing. If this information were available, your need for production could be matched with the appropriate appliance. Until now, foodservice operators have not demanded this type of vital information, and manufacturers have not felt compelled to provide it.

For over a century cooking equipment has been specified and ordered based on its nomenclature. For example, when you specify a 45-pound deep fat fryer, all that means is that it holds around 45 pounds of cooking oil. That doesn't tell you how many pounds of anything it will cook in an hour! Water heaters, heat and air-conditioning units, point of sale systems, lighting, electricity, gas and all other products used in restaurants are rated for efficiency, or operational capacity. When you specify a water heater, for example, you want to know the gallon capacity of the tank is, and you also want to know the gallons per hour recovery rate, based on a temperature rise of 70 degrees Fahrenheit. If it is

a gas water heater, you would also want to know what the cubic feet per minute ventilation requirements are, what the minimum and maximum gas pressures are, and what the btu requirements are and what the gas pipe size needs to be. Yet, when we specify a fryer we only seem to want to know how much oil it holds.

Approximately 16 years ago an energy consulting firm, Fisher-Nickel, Inc., which operates the Foodservice Technology Center in San Ramon, California, created a set of efficiency testing standards and protocol for commercial cooking appliances to measure productivity. These standards have been ratified by ASTM (American Society for Testing and Materials). The standards for fryers are based on real-world usage, and are uniform so that the testing process is the same for any piece of commercial cooking equipment tested. These results are only available by visiting <http://www.foodservicetechnologycenter.com>. Manufacturers are aware of the productivity ratings for those items tested, but generally they do not include those results in their literature. Operators would be surprised to discover, for example, that 45-pound deep fat fryers are ASTM rated at a low of 38 pounds, and a high of 90 pounds of product capacity per hour. This can be highly significant since foodservice margins are measured in pennies. The operator must make every second count when customers are pouring in the door.

Using the water heater analogy again, you determine that you need to maintain a 300 gallon per hour recovery rate, at a minimum temperature of 140 F to maintain sanitation quality. Not all water heaters are created equal, even though they may look alike. Water heaters have a certified recovery rating in gallons per hour, at various temperatures, so that you can determine the correct model based on your needs. This information is either published on cut sheets or easily obtainable from the manufacturers of water heaters. I'm sure that at some time in your life you wound up taking a cold shower because the water heater couldn't recover fast enough. In a home, the water heater that works just fine for a family of three is completely inadequate for a family of four. This is especially true if the kids are teenagers taking long showers. This example is exactly what happens with the fryers in a busy kitchen. The fryer's ability to recover is exclusive to its efficiency. Not all fryers are created equal. Their performance and productivity range from the (38 pounds per hour)

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economy gas models, (50 pounds per hour) standard atmospheric gas models, (60-70 pounds per hour) high efficiency gas models, (70 pounds per hour) 14 kW electric models, and (75-90 pounds per hour) 21kW electric models.

A simple visual example of the differences between electric and gas fryers can be seen in (Fig. 1) a pre-heat chart. Since pre-heat is directly proportional to recovery, the more quickly a fryer can get back to set temperature, the greater the fryer productivity. Other benefits of fast recovery are crispier product, less oil absorption, and higher revenues. The efficiency of electric can be seen in (Fig. 2) a thermal graphic image of an electric 14 kW and a high efficiency gas fryer, side by side, showing the waste heat going up the flue of the gas fryer.

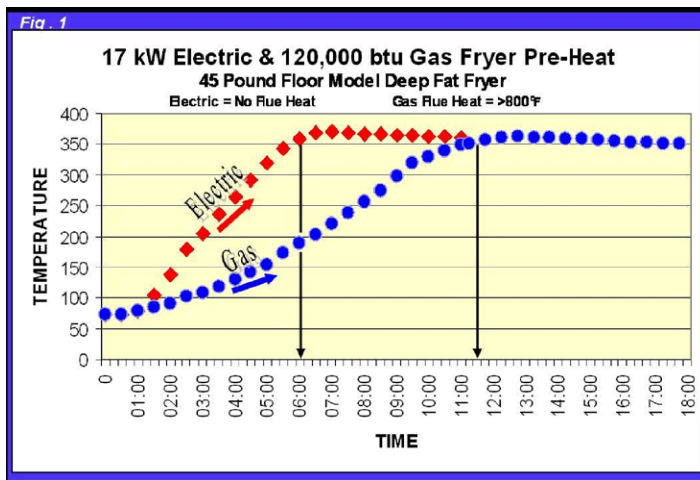


Figure 1 – Study conducted by Inframetrics Inc. on behalf of Alabama Power

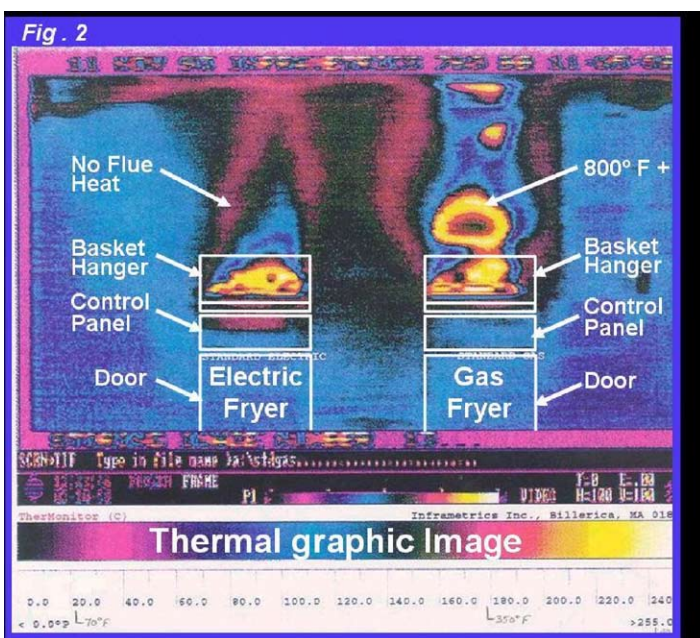


Figure 2 – Study conducted by Inframetrics Inc. on behalf of Alabama Power

The effect of lost productivity is apparent and obvious. Most of us have stopped at a fast food restaurant at the height of rush hour, and customers are stacked up six or seven deep at the cash register. What was going on in the kitchen? Could it have been that the fryers or griddles could not recover fast enough to keep up with patron demand? Operators call this condition “in the weeds” or “slammed.” Since most of us are busy with little time to spare, we cannot play “the waiting game,” so we leave. The restaurant’s daily revenues are greatly impacted in “lost opportunity cost” and “lost business goodwill cost.” This is compounded day after busy day.

The first step in improving productivity is to determine what your need for product is at the busiest hour in your foodservice day. Then, you will need to ask dealers or consultants to rate the productivity of the equipment items they specify for you based on ASTM standards. They will more than likely need to call the manufacturers’ engineering departments, or the Food Service Technology Center, San Ramon, California, that performed the evaluations. Also, ask your foodservice professionals to give you a cost benefit analysis of both electric and gas cooking equipment. You will then need to make a choice between lowest first cost and highest productivity. Sometimes the customer who has a desire for the lowest front-end cost winds up spending more. When you add the cost of lost productivity to the lower-priced equipment item, it can end up being more costly than if they had purchased the higher-priced yet more productive item. You absolutely cannot presume that one piece of equipment is just the same as another!

The cost of doing nothing is the highest cost of all. By focusing on your cooking process, you will be able to discover the bottlenecks in your operation. Doing your homework and seeking guidance from foodservice professionals will help remedy the bottlenecks. The correct cooking equipment will improve productivity, smooth out the product flow, improve service delivery, increase table turn, and raise bottom line profits. Once you have discovered the power of the optimal cooking appliance, you will wonder how you ever lived without it.