



Getting the Most from Your Cooking Equipment



Boost Your Profits with New Infrared Technology

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When the Gas Foodservice Equipment Network and the National Restaurant Association bestowed their highest innovation and technology awards to Thermal Engineering Corporation (TEC) for development of a new infrared cooking technology at this year's NRA Show, the effects of what this new technology might do for the foodservice industry were just beginning to unfold. Imagine, if you will, having the ability to cook inch thick rib eye steaks to medium rare perfection in less than eight minutes on a charbroiler that is practically self-cleaning! When you factor the energy savings due to its improved thermal efficiency, you have a piece of equipment that raises the bar to what may very well become a new standard in charbroiler technology.

Over the past several months, I have performed numerous cooking and cleaning evaluations with the Searmaster II Charbroiler and have been impressed with the results. The time savings through the cooking process is certain to increase production and could be a major benefit by enabling an operator to get four feet of production out of a three foot grill, thereby reducing the footprint and ultimately "first costs" in a new construction situation. The simplicity of just removing the cooking grates and wiping the glass heat emitter shields clean is a sure way to reduce the cumbersome and labor intensive process of keeping the unit clean.

The TEC units employ new steel infrared burners in combination with a secondary radiant glass emitter panel system, to provide unprecedented cooking intensity range and uniformity with virtually no flare-ups. Chefs who desire some visible flame can elevate the grids to allow for "controlled" flare-ups — a first of its kind innovation in gas charbroilers. The steel burners are not susceptible to impact breakage or water damage. They will not back-flash, even when

severely overfired or underfired.

Radiant infrared glass emitter shields are placed less than an inch above the burner tops, where the perforated stainless burner apertures produce a flameless glow and are specially configured so that the glass above emits 100% radiant energy into the cooking surface, with at least 95% cooking uniformity. Users can rapidly sear foods or slow cook for hours, all while retaining the natural moisture in the food. Regardless of the food's fat content (up to 100%), or the cooking speed, flare-ups are virtually eliminated. The versatility of this appliance even allows for cookware to be used directly on the cooking grids or on the emitter panels.

The innovations in this new line of gas charbroilers provide operators with the following benefits:

Improved gas energy efficiency — Approximately 50% more energy-efficient than TEC's original Searmaster infrared Charbroiler, the Searmaster II consumes less than 100 BTU/hr. per square

inch of cooking surface.

The infrared burners are metal — Not ceramic, not wire mesh. These all-sheet steel burners are not adversely affected by exposure to water. Extensive lab testing, which included cycling these burners for thousands of hours (continuously for fourteen months), indicates they have an extremely long life.

The cooking surface heat intensity is almost perfectly uniform — This achievement is possible because the new patent-pending burner is the first developed that requires no secondary air for combustion. This permits placement of a secondary emitter (ceramic, glass, or metal) within an inch of the burner top.

Improved cooking intensity variances — The range of cooking intensity is the widest available in any grill — from intense searing to barely warming. These all-sheet steel burners have a turn-down ratio of approximately 6.2 to 1. This equates into a versatile piece of cooking equipment that consumes less energy during the idle stage.




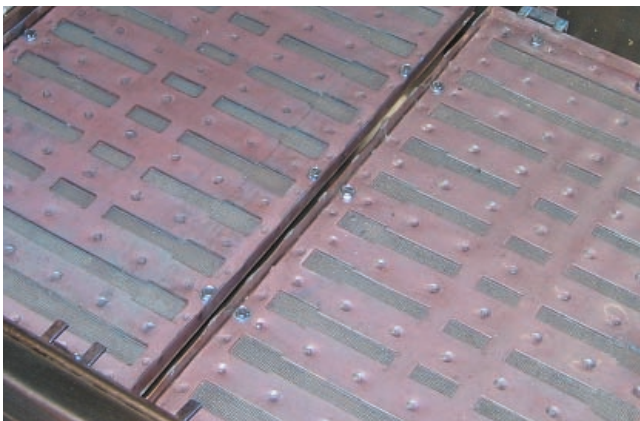
This award winning gas charbroiler provides cooking intensity and uniformity with virtually no flare-ups no matter what foods are cooked.

Improved flare resistance — No matter what is cooked, no matter what heat setting is used! Fewer flare-ups leave more moisture in the product with less shrinkage and higher product yields.

Easier to clean — This writer's field tests prove that the grids are very easy to clean with a wire brush and that the removable glass emitter shields are easily cleaned by scraping at the end of the day with a spatula and wiping with a damp cloth. The photos below illustrate this point with the residential model of this product. These two cleaning processes combined require just two to three minutes per cooking zone. You can even place the glass shields in the dishwasher each night, although this is not required for good performance.

Through the use of innovative technology, TEC has succeeded in developing a highly efficient workhorse of a gas charbroiler that not only saves the operator energy dollars, but increases production, reduces labor (for cleaning) and adds to that ever important bottom line.

For more information about new gas cooking technologies, please log on to the Gas Foodservice Equipment Network's website at www.gfen.info or e-mail me at: tom.stroozas@piedmontng.com. 




New perforated steel infrared burners produce an energy-efficient flameless glow.



A secondary radiant glass panel system emits 100% radiant energy into the cooking surface with at least 95% cooking uniformity.

Sample Cooking Times

- Preheat time to maximum intensity: approximately 10 minutes.
 - Time, after preheating, to cook 80% lean, ½ lb., ½-inch thick ground beef patties to 160°F: six minutes at high fire, with grill fully loaded.
 - Time, after preheating, to cook one-inch rib eye to medium rare (120°F): less than eight minutes at high fire.
 - Time, without preheating, to cook half of a four-pound chicken to 165°F: one hour at medium-low fire.
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Cleaning is simple — just remove the cooking grates and clean with a wire brush, then wipe the removable glass heat shields with a damp cloth.



The ease of cleaning can result in a virtually “new” cooking surface time after time.