2007 GFEN Blue Flame Product of the Year Award Form

Please e-mail this form to GFEN with supporting documentation: photo(s), specification sheets, brochures, etc. to GFEN. Entries must be submitted no later than **August 17, 2007** to Eric Burgis at eburgis@escenter.org or 400 North Capitol St., 4th Floor, Washington, DC 20001.

Appliance Name / Model #: **ECO – TECH PLUS ™ / ETP – 10G**

Description: **Pressureless Atmospheric 10 Pan Gas Steamer**

Date appliance first marketed**: May 2007** ***Unit sales price to customer:*** **List Price - $26,500**

Manufacturer: **Market Forge Industries, Inc.**

Address: **35 Garvey Street**

City: **Everett** ***State/Province:*** **MA** ***Zip:*** **02149** ***Country:*** **USA**

Phone: **617 / 387 - 4100** ***E-mail:*** **custserv@mfii.com**

Appliance features & benefits:

ENERGY STAR RATED: The ETP – 10G is the first of its size and capacity to receive the "Energy Star ". With the help and support of representatives from the EPA and the FSTC, Market Forge's new ETP-10G gave reason to revise the eligibility criteria for steamers. The ETP-10G reached an efficiency rating of nearly 40% during the heavy load potato test, yet its energy and water consumption was equal to or less than the requirements for a 6-pan model.

WATER MANAGEMENT SYSTEM: The ETP-10G is a Pressureless Atmospheric steamer. The patented water management system is a key component of the ENERGY STAR rating. The management system greatly reduces the condensate water usually required for Pressureless /Atmospheric steamers in this class. Pressureless/Atmospheric steamers typically require 100 gallons plus per hour to quench the drain water temperature to less than 140°F. The management system reduces that requirement to 15 gallons or less per hour for both Generator and Drain!

BUILT-IN FILTRATION: *Another industry first!* The ETP-10G is first in its class to package a filter system inside the steamer's cabinet base. Market Forge has removed a major headache for the consultant, dealer, end-user, and service agent with this feature. The "where to install" question has been answered with our self-contained system. The filter system comes complete with a monitoring device that alerts the end-user when it is time to replace the cartridges.

STEAM & HOLD CABINET: Each cooking cabinet can also be used as a NSF listed holding cabinet. Use one cabinet to steam and the other to hold. The ETP-10G is like four units in one. Once the product is cooked, each compartment will hold product at 150° - 170° F to prevent bacteria potential and loss of product integrity of steamed items.

ERGONOMICS: Most steamers in this class are thought to be too tall to take full advantage of the units capacity. The working height of the ETP-10G has addressed this issue with a working height of only 64" to the top compartment. However, the ETP-10G did not stop there; it also created an excellent working height from the floor up of 25".

ENVIRONMENTAL: The built-in patented water management system uses one-fifth of the water consumption of other typical steamers in its class.

INSTALLATION: Improper installation has always been and continues to be a major cause of equipment failure today. The ETP – 10G has addressed some of these critical causes by taking some of the guesswork out of the process. Because the ETP – 10G comes complete with an air break drain pan and filter system, a successful installation is more likely to be accomplished. Providing the necessary components will make a successful installation more probable.

NOTE: See Spec Sheet for additional Features & Benefits

Sales and economic impact:

MARKETING: The ETP -10G has been targeted to all States with rebate programs. With school budgets being tight, the ETP – 10G can provide some hidden operational savings to all schools without rebates as well. We have targeted Gas Utility Test Kitchens as another venue for customers to test, especially those located in States providing rebates for both Gas and Water. All Features & Benefits are being presented on a DVD and will be posted on our web site. A "green ad" is in print and soon to be released for publication purposes. Direct mailings have been sent out to the Consultant base, School Foodservice Directors, Dealers and Representative Sales group. A sell sheet is attached.

We are currently working with a local chain to demonstrate the ETP – 10G'S performance, but also what they can expect for monthly / annual savings. Based on their eight hour day of constant use, the ETP – 10G will produce a monthly savings for both gas and water of approximately $400. Gas savings $250 and water another $150. This one customer would use three ETP-10G's in each of their locations. They currently operate more than 25 stores.

ECONOMIC IMPACT: The ETP - 10G's impact on the industry will depend on an end-user's steaming habits. Typical steamers in this class are generally turned on in the morning and are left to operate continuously without recognizing how their costs are spinning out of control. The ETP-10G used 25,000 BTU's and less than 7 gallons of water per compartment during the ASTM heavy load potato test. The annual savings an end-user could expect are dependant on the model gas steamer they are currently using. Again, typical steamers in this class use 100% of the BTU rating and more than 50 gallons of water per hour per compartment.

Innovative principles:

CREATIVITY: Aside from the Features & Benefits listed above, the ETP – 10G is a complete steam system unlike any other available on the market today. We prefer to label it "Steam – On – Demand". The ETP – 10G only creates steam as needed through a precise water column pressure control. When cold product is placed into the compartment, the burners will fire continuously releasing energy into the product. As the product absorbs the energy, the demand for steam will be decreased by the rise in temperature of the product. The water column pressure will also rise thus causing the burners to cycle off and conserve gas and water.

TECHNOLOGY: The ETP - 10G has found better use of inshot burner technology. The inshot burners provide rapid heat transfer when needed. A spark ignition will light off a standing pilot that stays lit through the on and off cycles. The standing pilot enables the gas generators to stay ready with a minimal amount of idle energy being used when in the standby mode.

QUALITY: Steaming compartments are made of 316-type stainless steel. Best in the industry! Simple controls and easy to service. Integrated filter system eliminates installation issues.

ENVIRONMENTAL: The ETP – 10G will reduce a customer's environmental footprint by 60% and higher for gas and 80% or more for water.

Technology improvements:

With the placement of the individual gas generators behind the cooking cavities, a significant amount of cabinet space was created below to allow for the first ever integrated filter system. This feature has eliminated a significant obstacle for Consultants, Dealers and End Users as to where to install the filter. The filter system even comes complete with an audible alarm to inform the end-user that it is time to replace the filter cartridges.

SAVINGS: The ROI a customer could expect with the ETP – 10G would be less than 3 years with available rebates. Read MARKETING paragraph above.

PRODUCTIVITY: See attached test results from FSTC.

ENERGY: See attached test results from FSTC.

SAFETY: This category does not seem to be applicable for this model, but the ETP – 10G does have steam interlock door switches and a proved ignition system.

Individual submitting entry: **Mark Manganiello** ***Date Submitted:*** **August 15, 2007**

Title: **Manger of Engineering Services**

Organization: **Market Forge Industries, Inc.**

Address: **35 Garvey Street**

City: **Everett** ***State/Province:*** **MA** ***Zip:*** **02149** ***Country:*** **USA**

Phone: **617 / 420 - 0259** ***Email:*** **markm@mfii.com**

MARKET FORGE
INDUSTRIES INC.
An Employee Owned Company
"The Premier Steam Cooking Equipment Manufacturer"

INTRODUCES...
THE FIRST COMPLETE STEAM SYSTEM

- Energy Saving and Money Saving.
- Save on Total Water Consumption.
- Save Gas BTU's Consumption.
- Energy Star Rated (*The First Full Size Steamer*).
- Steam on Demand Concept.
- The First Built-In Water Filter System.
- The First Built-In Water Management System.
- Built-In Steam and Hold.
- Perfect Height, Only 64" of Working Height.
- Rebates Available for Gas and Water Via Energy Star Rated.

ENERGY STAR

Other Conventional Steam Cookers	"NEW" Eco-Tech Plus Steam on Demand
Total Water Consumption	Total Water Consumption
One Hour Running Time	One Hour Running Time
60 Gallons Per Compartment	6.75 Gallons Per Compartment
Total of 120 Gallons of Water Per Hour	Total of 14 Gallons of Water Per Hour
	Save 106 Gallons of Water Per Hour
	Save on Water Bills
	Save on Gas Bills

Think... Save Money. Think... Save Energy. Think... Less Maintenance.

Think... The Complete Energy Saving System.

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G ETP-10G ECO-TECH PLUS ATMOSPHERIC STEAMER

JOB NAME: _____
ITEM NO.: _____
NO. REQUIRED: _____

MODEL: ● ETP-10G

DESCRIPTION:
The Eco-Tech Plus Atmospheric Steamer from Market Forge Industries is a stainless steel atmospheric steamer with two cooking compartments, each with an independent close-coupled atmospheric 42,000 BTU gas steam generator.

Benefits: The Eco-Tech Plus incorporates a water management system that reduces the amount of water used to condense generated steam, resulting in substantial savings on energy-related costs.

Industry First!: The ETP-10G is the only Atmospheric Twin Generator Steamer that comes complete with a self contained water filter system. The built-in system eliminates the hassle of where to put the filter and also provides a warning indicator when it is time to change the cartridges.

The Energy Star rating may qualify for rebates in your state. Consult your local utility company for details.

Construction: Eco-Tech Plus cooking compartments and cabinet are stainless steel with unitized body construction. Cooking compartments have removable left, right, and rear body panels. Each cooking compartment has a positive, fully insulated, slam-action door constructed of Type 300 stainless steel. Door gasket is a one-piece, NSF Approved silicone rubber gasket mounted on the inside of the door. Compartments are equipped with door interlock switches that automatically cut off power to the gas valve when the doors are opened.

TECHNICAL SPECIFICATIONS:
Cooking Compartment: Each compartment is provided with stainless steel pan support racks and a stainless steel liner. The front edge of the bottom compartment contains a condensate drip trough that drains automatically to a water management tempering tank.

Controls: Each compartment is individually controlled by an on/off power switch and 60-minute electromechanical timer. At the end of the cooking time, a continuous signal will sound which can be silenced by returning the timer to the off position. An exclusive mode selector gives the operator the option of using each cooking cavity as a holding cabinet.

Operation: Each compartment utilizes a powerful close-coupled 42,000 BTU steam generator that supplies steam to the cooking compartments. Generators are held in the

"ready" mode for quick response for heavy-demand situations. Each generator is rated at 42,000 BTU. Generator chambers are mounted at the rear of the steamer cavity and close-coupled to the steam compartment. Generators include as standard a pilotless ignition system, automatic water level control, low-water cutoff, safety relief valve, and preheat thermostat (190°F) and high limit. Each generator includes an access port for Total Concept delimer/descaler.

DIMENSIONS AND CAPACITY:
Internal Dimensions of cooking compartments:
14" Wide x 17.25" High x 21" Front-To-Back.
(*355 mm Wide x 438 mm High x 533 mm Front-To-Back*)

Allow 6" 152 mm of space on the right side if height of adjoining wall or equipment exceeds 29" 737 mm.

Capacity:
Each cooking compartment will accommodate
(9) 12" x 20" x 1" deep pans
(5) 12" x 20" x 21/2" deep pans
(3) 12" x 20" x 4" deep pans

OPTIONAL:
- 12" x 20" x 1" perforated stainless steel pans.
- 12" x 20" x 2 1/2" perforated stainless steel pans.
- 12" x 20" x 2 1/2" solid stainless steel pans.
- 12" x 20" x 4" perforated stainless steel pans.
- 12" x 20" x 4" solid stainless steel pans.
- Total Concept Descaler (case of 4 gallons).
- Casters with Strain Relief.

SPEC SHEET: S-6500A
06/07

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AutoQuotes

MARKET FORGE INDUSTRIES INC.
An Employee Owned Company

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G ETP-10G ECO-TECH PLUS ATMOSPHERIC STEAMER

DETAILS & DIMENSION

SPEC SHEET: S-6500A
06/07

FOOD SERVICE EQUIPMENT
Atmospheric Steamer

SERVICE CONNECTIONS

G	Gas Connection - 3/4" NPT (Male) 84,000 BTU's.
CW1	Cold Water - Generator - 3/8" O.D. tubing, Maximum 50 PSI, Minimum 25 PSI.
CW2	Cold Water - Condenser - 3/8" O.D. tubing, Maximum 50 PSI, Minimum 25 PSI.
D	Drain - 1 1/2" O.D. tube to open floor drain.
EC	Electrical Connection - 120 Volts AC, 60 Hz, single phase, comes with 6 foot cord. NEMA 5-15.

INSTALLATION CLEARANCE

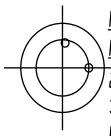
Left Side	Right Side	Rear
3	8	6

Gas Connection: 3/4" NPT male 3 1/2" W.C. natural
10" W.C. propane

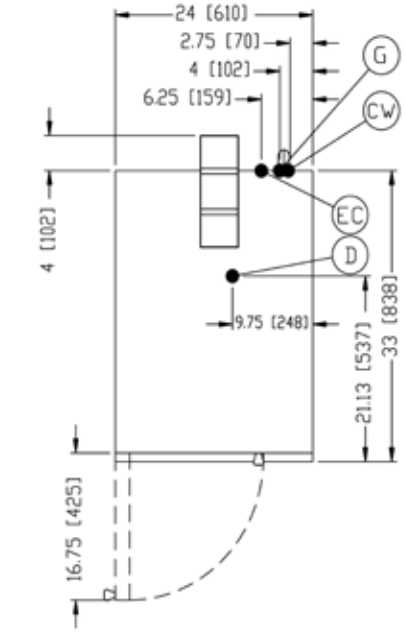
NOTES: *If the equipment is to be installed where the elevation exceeds 2,000 ft. (609.6 meters) above sea level, specify installation altitudes so that the proper gas orifices can be provided. Rated Input: 42,000 BTU per compartment.*

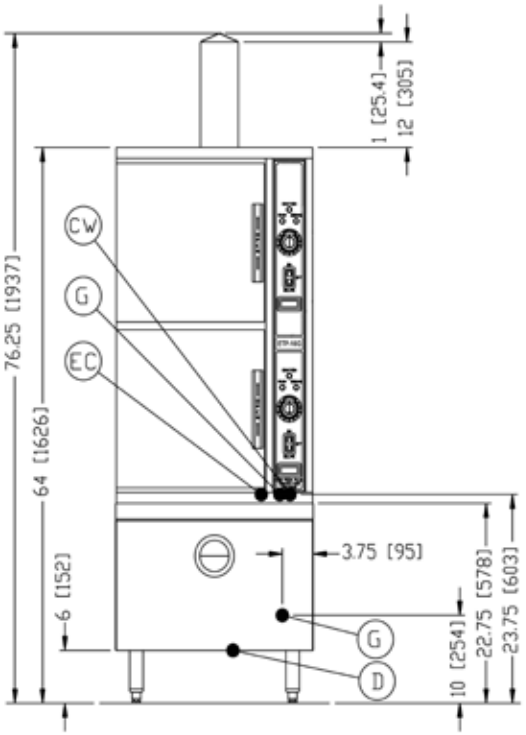
All service connections are made at the bottom of the unit, in the 6" high space between the floor and the bottom of the cabinet.

Drain: 1 1/2" O.D. pipe coupled to 1 1/2" O.D. tempering tank drain. Do not make solid connection to floor drain. PVC and CPVC pipe are not acceptable materials for drains. Before connecting water to this unit, have water supply analyzed to make sure that hardness is no greater than 2.0 grains per gallon and a pH level is within the range of 7.0–8.5. Water that fails to meet these standards should be treated by the installation of a water conditioner. Equipment failure caused by inadequate water quality is not covered under warranty.



REAR FLANGED FOOT DETAIL
2 EQUALLY SPACED Ø7/16" [11mm] HOLES ON 2.5" [63mm] B.C.





*It is our policy to build equipment which is design certified by A.G.A./C.G.A. and N.S.F. However, a continuing program of product improvement makes it necessary to submit new models to the agencies as they are developed and consequently not all models bear the appropriate agency labels at all times.

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Market Forge ETP-10G

Energy Input Rate	
Measured (max)	82226 Btu/hr
Rated	84000 Btu/hr
Percent Difference between Measured and Rated	2.1 %
Appliance Preheat Energy Consumption and Duration	
Energy Consumption	16690 Btu
Duration	20.8 min
Appliance Idle Energy Rate	
Idle Energy Rate	5694 Btu/hr

Frozen Green Peas Cooking Time, Energy Efficiency, Energy Rate, Production Capacity, and Water Consumption Rate

Heavy-Load	
Cooking Time	30.2min
Cooking-Energy Efficiency	55.6± 2.9 %
Cooking Energy Rate	74645 Btu/hr
Production Capacity	159.1± 4.9lb/h
Water Consumption Rate	6.9 gal/h
Light-Load:	
Cooking Time	20.1 min
Cooking-Energy Efficiency	40.8 ± 1.6%
Cooking Energy Rate	31385 Btu/hr
Production Rate	47.8± 3.6 lb/hr
Water Consumption Rate	4.2 gal/h

Whole Red Potatoes Cooking Time, Energy Efficiency, Energy Rate, Production Capacity, and Water Consumption Rate

Heavy-Load:	
Cooking Time	26.5 min
Cooking-Energy Efficiency	39.7± 0.1 %
Cooking Energy Rate	50694 Btu/hr
Production Capacity	181.5 ± 0.8lb/h
Water Consumption Rate	7.8 gal/h

Light-Load:	
Cooking Time	23.4 min
Cooking-Energy Efficiency	19.3 ±0.8 %
Cooking Energy Rate	23608 Btu/hr
Production Capacity	41.1± 4.1lb/h
Water Consumption Rate	5.8 gal/h

Ice Load Uniformity & Time

Cooking Time	36.7min
Initial Temperature (avg.)	2.1 °F
Final Max. Temperature Difference (hottest to coldest)	15.9 °F
Time for final pan to reach 170 °F	36.7 min
Time between first and last pans reaching 170 °F	3.5 min

Figure 1. Representative Ice Load Uniformity Profile.