



PERFECTFLAME®



READ MANUAL BEFORE OPERATION



PERFECTFLAME®  
MODEL MT

**PERFECTFLAME**™  
**WE'VE  
CHANGED  
THE GAME  
FOR GOOD**

# INTRODUCING:

# THE FIRST PERFECT ENGINEERED FLAME

**BRAZE LIKE A PRO WITH THE NEW PERFECT FLAME®. ITS PATENTED DESIGN ALLOWS THE USE OF PRE-  
SAVED FLAME SETTINGS WHEN AND WHERE YOU NEED THEM. THIS SMART TECHNOLOGY ENSURES QUALITY AND  
CONSISTENCY THROUGH YOUR ENTIRE PROCESS.**

Featuring built-in software that sets and monitors an engineered flame. The Perfect Flame's game-changing software captures each operator's "torch on time" and flame settings. This information is available on a custom dashboard which allows your engineering and quality teams to analyze this information for the first time.



## DEFINE

Define the different flames you need for your production with our software.



## MEASURE

Using the software program, you can now measure the exact energy (BTU or KCAL) of your flame.



## ANALYZE

Use data generated to compare to the current process data to find the perfect flame for your specific application and operation.





## IMPROVE

Make detailed, repeatable adjustments to the flames for each specific application to achieve maximum operational efficiency.



## CONTROL

Multi-tier security features allow management to lock settings in to produce a consistent flame from operator to operator, shift to shift, and location to location.

The built-in software analyzes the flame of any operator, measuring chemistry, flow rates, temperature, BTU, and flame types. This data is stored for analysis and future use to consistently produce the ideal production flames needed for each application. These saved flames can be reproduced anywhere a Perfect Flame is being used, so all operators are using the same flame and producing the same, perfect results.

### WHAT DOES THIS MEAN FOR YOU AND YOUR BUSINESS?

- Fewer leaks
- Flame control and standardization
- Less rework
- Improved throughput
- Less gas usage
- Data analytics
- Improved quality
- Maximum operational efficiency
- Less operator training and requalification
- Reduce brazing expertise needed

### WHICH OF THESE INCREDIBLE BENEFITS WILL AFFECT YOUR BOTTOM LINE THE MOST?

Try our Documented Cost Reduction (DCR) Program. Our team will conduct a full operational audit, including Clearance, Filler Metal, Cleaning, Heat Input, Flux, and Post Braze Processes, to help you identify potential areas for improvement. After completion, we will provide a DCR report, which will outline projects and solutions for potential improvements, as well as the savings associated with them, including leak reduction programs, material cost reductions, operator training programs and optimal equipment selection.





# PERFECT—DOWN TO THE LAST DETAIL.

## EASY-TO-USE INTERFACE

**FLAME SETUP**

Flame:

Gas Type: Propane/LPG Unit Format: Imperial

Oxygen Flow Rate: 17.50 Fuel Gas Flow Rate: 6.50 SCFH

Flame Chemistry

Flame Type: NEUTRAL

BTU: 16659

Flame Temp (deg. F): 4708

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## SET YOUR FLAME

**Job Setup**

Job Number: 23438764234

Job Name: LINE MAIN 1

7123

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## CREATE YOUR JOB

**PRODUCTION MODE**

Flame: LINE MEDIUM 1

Job: SUB ASSEMBLY

Gas Type: Propane/LPG

Unit Format: Imperial

Flow Rate (SCFH): Oxygen: 5.39 Fuel Gas: 1.99

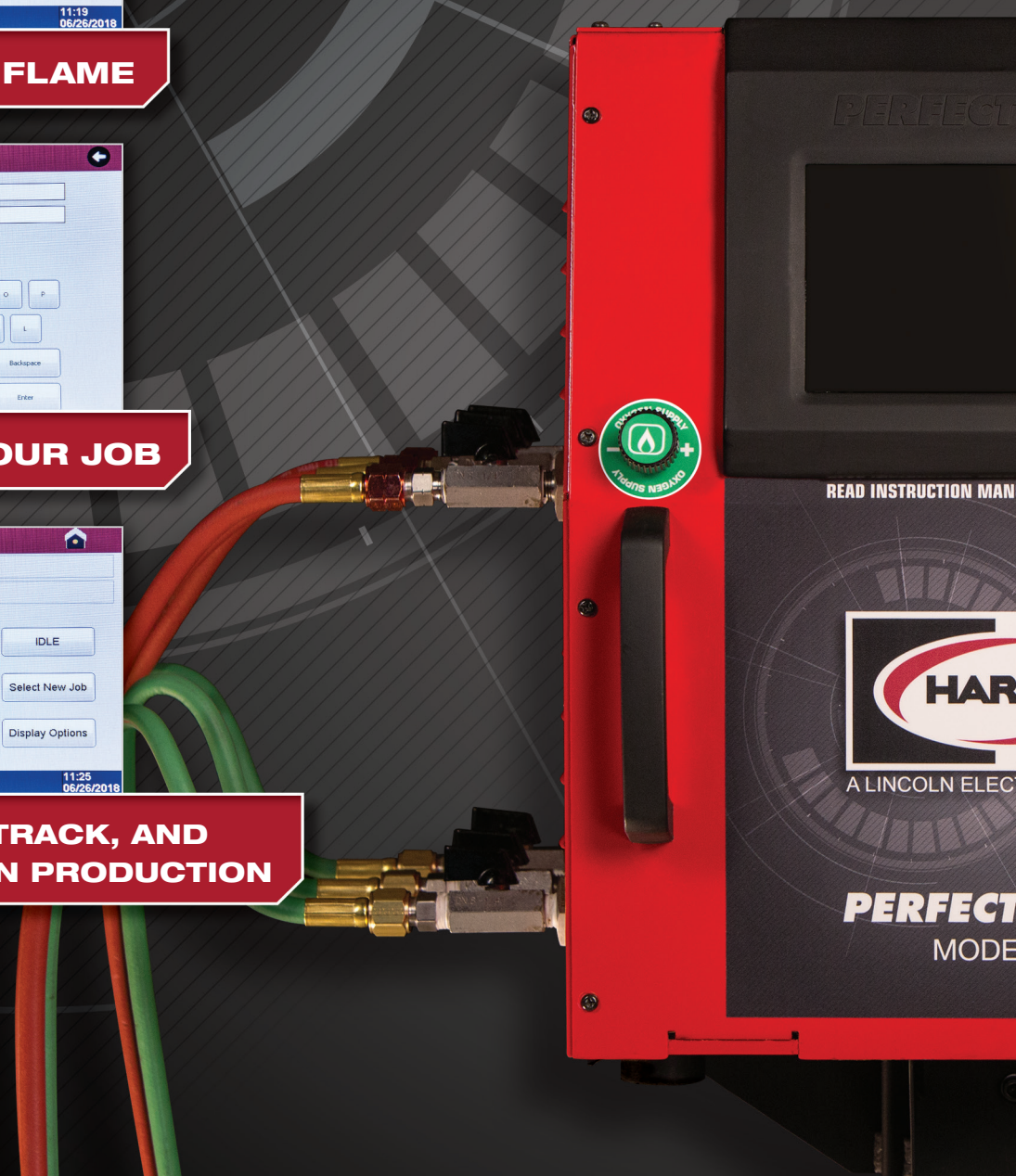
Flame Chemistry: NEUTRAL

BTU: 5072

Flame Temp (deg F): 4708

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## MONITOR, TRACK, AND CONTROL IN PRODUCTION



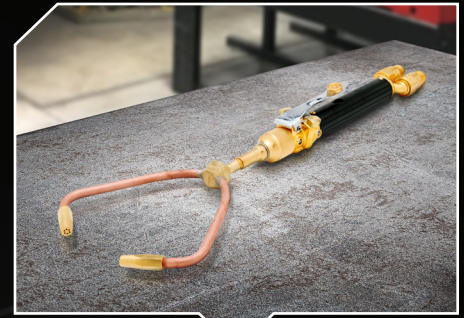


## CONTROL TECHNOLOGY

- Thermal mass based Mass Flow Controller (MFC)
- Control based on flow of gas in CFH or LPM
- Gases supported: Natural Gas/Methane, Propane/LPG, Propylene, Butane, Acetylene, and Hydrogen
- Custom CPU & power supply — 80v to 240v and 50 – 60Hz — ensures the Perfect Flame can be used anywhere in the world
- Draws just 1.5 amps

## FIRMWARE FEATURES

- Flame settings are stored on the local machine memory
- Operators can select from approved flame settings stored on their units, but only a supervisor with a password can change any pre-saved flame settings and control what flames are available to the operator
- Ability to save different settings unique to each job being performed
- Collects and stores data from several parameters
- Wi-Fi relays data to custom dashboard for review and analysis



## TORCH

- Adjustment knobs have been removed so operators cannot change the flame
- Turn off the flame using a Harris 50-10 torch with automatic on/off switch or a Harris gas block

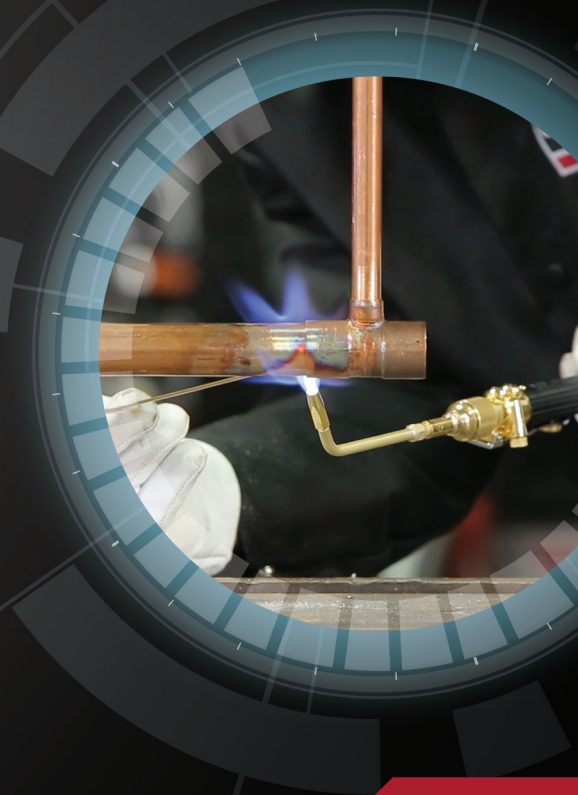
## ENCLOSURE

- Industrial design and water-resistant
- Manufactured to IP-1921 spec — the same as Lincoln Electric® welders



## MOUNTING

- Back mountable to hang on a wall
- Capable of mounting to a pedestal or table top
- Rubber legs absorb vibration





# SINGLE-TORCH & MULTI-TORCH DESIGNS

FIND THE PERFECT SOLUTION FOR YOUR UNIQUE NEEDS



## SINGLE-TORCH MODEL ST

The single-torch configuration allows the brazer to toggle between five different settings to quickly and seamlessly switch between different preset flames for different braze connections. Hands-free technology allows users to switch between flames via foot pedal, selecting up to 5 preset flames from a library of up to 100. This configuration is perfect for the brazing operator who has multiple different braze joints per job and needs to quickly adjust the flame settings.



## MULTI-TORCH MODEL MT

This configuration is best suited for high production operations where individual operators are brazing the same or different joints. Three operators can be using the same or different flames, each controlled by one Model MT unit.



P/N: 9009624\*  
COMPLETE FILTER  
ASSEMBLY

\* Recommended with all Perfect Flame® purchases. One required for fuel, one required for oxygen to be installed on the gas inlet side.

PART NO.	DESCRIPTION
4301948	SYSTEM, COMPLETE PF2ST
4301949	SYSTEM, COMPLETE PF2MT CE
4301947	PEDESTAL PF2
9104521	FOOT-SWITCH-ASSY PF2
9009624	COMPLETE FILTER ASSEMBLY PF2 10-15 MICRON SS W/HOUSING
9009622	FILTER, PF2 10-15 MICRON SS
9009623	GASKET, PF2 FILTER HOUSING



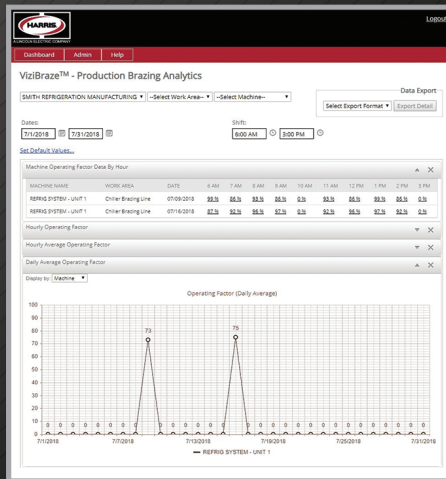
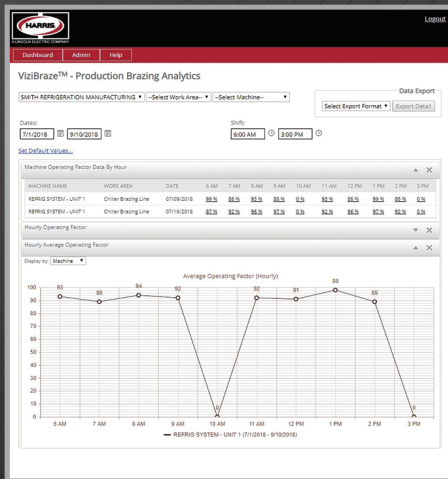
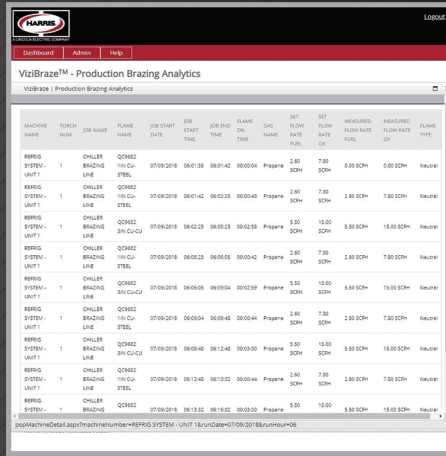
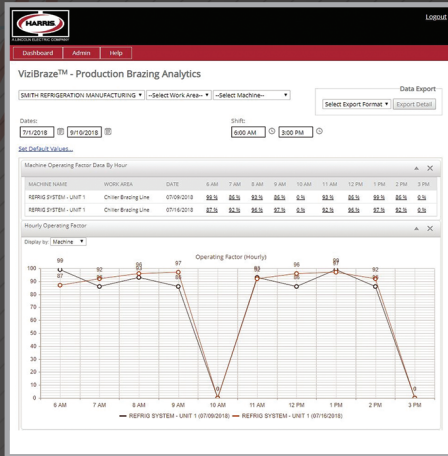
# MONITOR, TRACK,

GET THE clearest view into the efficiency and quality of your production



## ViziBrazed™

Now that the Perfect Flame® has given you full control over the flame settings, our new firmware technology, ViziBrazed™, gives management the ability to track the “torch on time” for each individual operator. Now, for the first time, you can track the “Operating Factor” or the amount of time each torch is being used. Imagine setting a standard brazing time for any braze connection and being able to ensure that your operators are following procedure. With multiple Perfect Flames in operation, you can monitor, track, and control operating factor for one operator, one shift, one line, one facility, or over your entire organization. With this information, you can see where quality and consistency can be improved, waste can be cut, time can be saved, and profits can be grown.



We know security is paramount. Perfect Flame data is stored and secured in the cloud, and is accessible to you from any place, at any time. Usage data is owned by you and never shared outside your organization.

## PERFECT FLAME™

The patent-pending technology inside the Perfect Flame is the result of our longstanding history of improving operations across the brazing industry. Our expertise is unrivaled and the Perfect Flame's ability to revolutionize your brazing operation's efficiency is unmatched.

# READY FOR THE NEXT ERA OF BRAZING? CONTACT HARRIS TODAY.



1.800.733.4043

OR



<https://harris.co/PerfectFlame>

OR



[custservmason@jwharris.com](mailto:custservmason@jwharris.com)

Ask about our Documented Cost Reduction (DCR) Program and see just how impactful the Perfect Flame can be for your bottom line.



# OUR PROMISE

Our experienced sales and technical personnel are trained to assist our customers in producing sound, cost-effective brazed assemblies. Our international presence means we can assist our customers' operation anywhere in the world. Harris is backed by the financial strength and technical resources of The Lincoln Electric Company

— THE GLOBAL LEADER IN WELDING SYSTEMS AND FILLER METALS.

Perfect Flame® is a registered trademark of The Lincoln Electric Company



A LINCOLN ELECTRIC COMPANY

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