

# Solaronics® ADVANCED TECHNOLOGY BURNERS

Solaronics, a family owned and operated company founded in 1960, is a leading producer of burner systems for multiple industries. Our dedication to the fuel-burning industry has consistently led us to be recognized by industry professionals and the trade press for our advanced burner technology, ignition systems, gas/air delivery systems and appliance design services. Working closely with the appliance manufacturers and process heating equipment customer for over 40 years, the company has helped establish industry standards for product construction and application, performance, operation, and safety.

Our gas burner systems embrace both infrared and blue flame technology and our team can provide your company with the support needed for any fuel burning project. If you are seeking a build-to-spec burner or a custom-built solution, our company can fulfill your individual needs. We offer specialized services for any phase of your project, whether it is to assist with an early proof of concept model, expanding to newer markets, continuous improvement, or enhancing existing reliability.

Known in the industry for our commitment to service, quality, and advanced technology, our burners are preferred over other manufacturers.

Our state of the art facilities allow us flexibility to design a burner to fit your application, rather than the application changing to fit an 'off-the-shelf' burner.

## WHAT WE OFFER

- Concept to production development
- Build to spec or custom designed burner solutions
- Full 3D and 2D CAD capabilities
- Product certification assistance
- Full supply of test gases and limit gases for CE and other international tests
- Reliability, HALT/HASS testing

## PROCESS HEATING APPLICATIONS

Drying  
Pre-Heating  
Dehydrating  
Cooking  
Evaporating  
Immersion Heating  
Chemical Processes

## BURNER TYPES

Ceramic Plaque Burners  
Wire Mesh Burners  
Package Burners  
Woven Ceramic Fiber Burners (WCF)  
Metal Fiber Burners  
Metallic Foam Burners

## APPLIANCE APPLICATIONS

Barbecues	Dishwashers
Broilers	Furnaces
Pizza Ovens	Ranges
Steak Cookers	Boilers
Fireplaces	Hot Water Heaters
Humidifiers	Bake Ovens
Convection Ovens	Rotisserie Ovens
Griddles	Space Heaters
Hold Ovens	Evaporators
Fryers	

*Make Solaronics Burner Systems  
your choice for smart, energy saving  
performance, reliability and value*

## WOVEN CERAMIC FIBER

- Continuous operating temperature of 1,100°C (Max)
- Typical loading of 450 BTU/Sq. inch in infrared
- Typical loading of 4500 BTU/Sq. inch in blue flame
- Medium warm up period – usually takes less than a minute to get to temperature
- Very flexible – good for cylindrical burners
- Higher back pressure, thus not needing a full distributor / baffle plate
- Good as infrared or blue flame
- Average flame sense capability – may need additional grounding screen



## METAL FIBER

- Continuous operating temperature of 1,000°C (Max)
- Typical loading of 600-700 BTU/Sq. inch in infrared (powered burners)
- Typical loading of 3,000 – 8,000 BTU/Sq. inch in blue flame (powered burners)
- High impact resistance
- Medium back pressure – does still usually require a distributor
- Able to be welded



## WIRE MESH

- Continuous operating temperature of 1,300°C (Max)
- Typical loading of 200-400 BTU/Sq inch
- High impact resistance
- Low flexibility (not suited for exotic burner designs)
- Medium warm up period – usually takes less than a minute to get to temperature
- Low backpressure – distributor is usually needed, depending on the weave and layers utilized
- Not well suited for blue flame
- More prone to back flashing
- Expansion can be an issue if not properly addressed
- Excellent flame sense capability
- Extremely low risk of contamination – burner does not have fibers or gaskets that could come loose
- Limited on size – burner has a risk of back-flashing if surface area is too large
- Will oxidize over a period of time



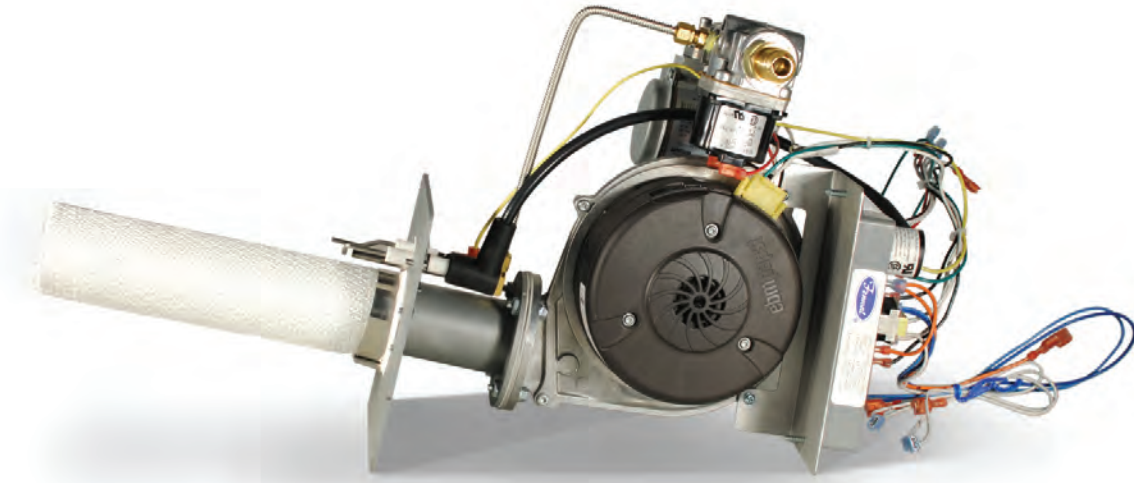
## CERAMIC TILE

- Continuous operating temperature of 1,350°C (Max)
- Typical loading of 300 BTU/Sq. inch
- Ideal for infrared surface combustion
- Proven reliability with over 50 years of historical field data
- Best used as IR
- High insulation properties
- Inexpensive
- Not well suited for blue flame
- Low impact resistance
- Rigid, not easily shapeable
- Requires a mechanical means to affix it into a burner
- Tile face has depth which makes it less susceptible to backlight or backflash
- Average flame sense capability
- Ability to block certain areas of the tile to manipulate the heat pattern
- Slower warm up period – may take several minutes to get to full temperature to output IR
- Will not oxidize



## PACKAGE

Solaronics Complete Burner Packages are the ultimate plug and play burner assembly. These units are manufactured with the end goal being the ability to take the assembly out of the box and install it directly into your application. The assemblies can include an ignitor, ignition control module, and pre-mix engine all connected with a custom solution wiring harness. Why choose a Solaronics' complete burner package? Simply put, it can save money. The labor of assembling the components, along with the cost involved in keeping physical inventory, can be eliminated with the complete burner package.



**Solaronics®**

3720 S. Lapeer Rd.  
Auburn Hills, MI 48326

☎ Phone: 1.800.223.5335  
☎ Fax: 248.651.0357  
🌐 solaronicsusa.com  
✉ sales@solaronicsusa.com

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# Burners

Advanced Gas Burner Technology

For Commercial / Residential Appliance and Process Heating Applications

## METALLIC FOAM

- Continuous operating temperature of 1,100-1,200 °C (Max)
- Typical loading of 800 BTU/Sq. inch in infrared
- Typical loading of 3,000+ BTU/Sq. inch in blue flame
- High impact resistance
- Low backpressure – typically needs a distributor or back plate
- Medium flexibility – can be shaped but does lose some strength when doing sharp bends
- Ability to be welded
- Capable of catalytic style burners with a proper wash coat
- Extremely fast warm up period – outputting Infrared heat within seconds
- Very tolerant to thermal shock
- Can come pre-oxidized

