

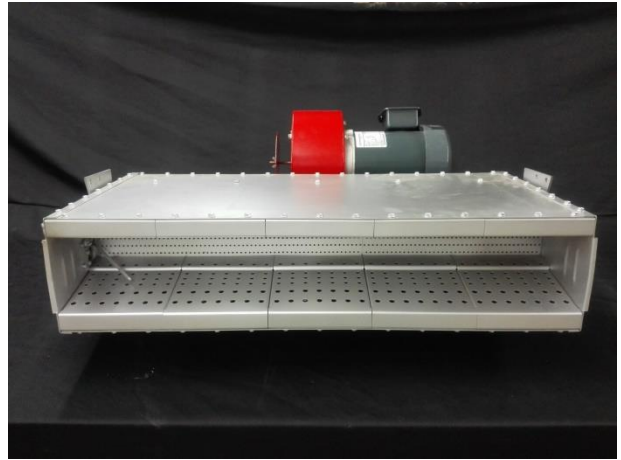
# Pyronics PH Burner

Capacity Range: 500,000 – 9 MM Btu/hr

## Custom Packages Provide Flexibility

Pyronics PH Package Burners are air heating burners that direct combustion air across distribution air foils to heat fresh or recirculated air in ovens, air ducts, and other applications. Standard and customizable packages offer compact, pre-piped, pre-wired, prepackaged burners ready to fire 500,000 – 9 MM Btu/hr. Packages can include burner, blower (if necessary), fuel control, gas train, and control panel. Higher thermal capacities are available with special packages and custom burner configurations.

*Contact a Selas representative to build a PH burner package system for your air heat application.*



A PH burner with integral blower mounted on the back.

Feature	Benefit
Versatile package burner for wide breadth of applications	Meets heat and performance requirements of numerous applications and processes with multiple configurations available
Up to 40:1 Turndown	Process temperature uniformity,
	Wide range of firing rates eliminating unnecessary burner shut-down and untimely restarts
100% tested before leaving the factory	Ensures superior performance

## Wide Range of Air Heat Applications, One Burner

Typical applications include fresh or recirculated, low temperature (up to 1,200°F) air heating applications for industrial ovens & dryers and industrial heating.

- Industrial Dryers
- Industrial Spray Booths
- Air Replacement Systems
- Air Handling Units
- Drying and Curing Rooms



The Heat Technology Company™

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**Typical burner packages include:**

1. Basic burner assembly includes burner, spark ignitor, flame rod, and peep sight.
2. Integral combustion air blower fitted with TEFC blower motor (50 Hz or 60 Hz).
3. Fuel control provided by a control motor and threaded butterfly valve offers fixed air – gas only modulation.
4. Gas train includes automatic shut-off valves, gas and air pressure switches, and proof of closure, meeting the requirements of NFPA 86 & CSA for operation in North America. Configurations for operation in other countries are available, consult the factory.
5. Mounted, pre-wired NEMA 12 control panel with external display includes on-off switch, reset button, and burner run and flame failure indication lights.

**Add-on options include:**

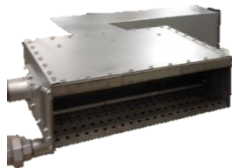
- Ultra-Violet scanner
- High temperature limit
- Temperature controller
- Main gas regulator

**Choose a Mounting Configuration:** Full flanged, gap-fired brackets, or mounted in duct work.

**Choose a Burner Configuration:**

Countless geometric nozzle arrangements can be created with these basic nozzle configurations to achieve desired heat input and heat distribution for specific air duct geometries. Most PH burners use a rectangular burner, but for capacities over 5 MM Btu/hr burner configuration will change. Main geometries include:

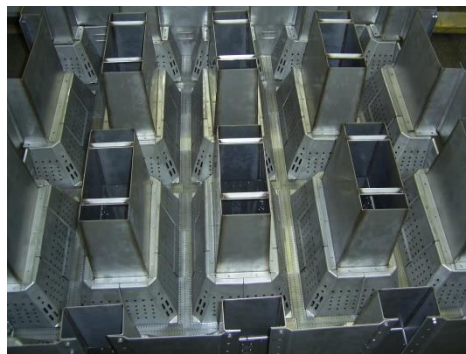
**Rectangular**



**“H” (or two, ‘T’ configurations)**



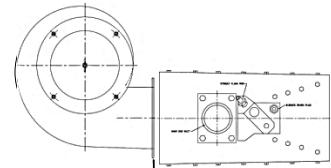
Complex nozzle configurations can be custom-developed to meet the heating needs of the process. Use the basic nozzle shapes to construct a custom nozzle design like the pictured configuration below.



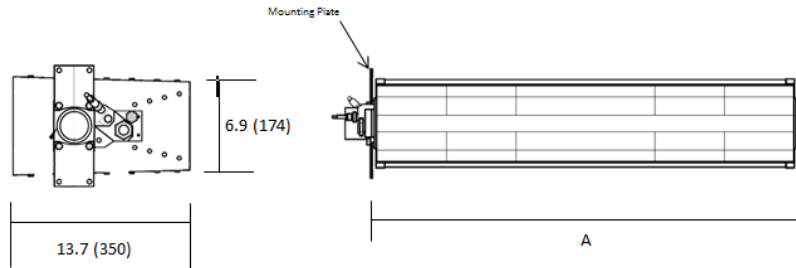
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**PH** – The PH series burner is a gap-fired unit mounted to the oven wall and includes a burner, blower, and blower motor. Packages including gas control, gas train, and controls are available.



**PH-O** – The “open back” configuration, also gap-fired, uses process air for combustion without a combustion air blower. This configuration requires a minimum pressure drop of 1” of water column across the burner. Suitable operating ranges are a maximum upstream temperature of 752°F (400°C) and maximum downstream temperatures of 1200°F (~650°C).



**PH-SP** – The SP is a side-plate-mounted burner where burner, blower, and blower motor are mounted inside the air duct and all other package components are mounted outside the duct. The SP is designed for in-duct operation where an integral combustion fan is mounted on the back of the burner. The SP burner is ideal for low temperature, ambient air heating applications. This burner arrangement is appropriate for upstream temperatures below 104°F (40°C), and downstream temperatures up to 248°F (120°C).



The SP arrangement includes an integral combustion fan and burner side-mounted inside the air duct.

**PH-RSP** – The RSP is a side-plate-mounted burner where all burner package components, other than the burner head, are mounted outside the air duct. The RSP is the best suited for in-duct firing in industrial recirculation ovens. The arrangement includes a center-mounted burner head inside the duct, and a combustion fan mounted outside the duct to manage significantly higher upstream (up to 752°F, 400°C) and downstream temperatures (1200°F, ~650°C). All combustion air is supplied through an integral air duct from the external combustion fan.



RSP arrangement includes a combustion blower mounted outside air duct and burner center-mounted in the air duct.



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