



## **EXOTHERMICS HEAT EXCHANGERS**

Transfer Energy with Greater Efficiency



# Need to Optimize Heat Recovery

Energy efficiency is one of the top priorities in the process industry. Manufacturers are under growing pressure to reduce fuel requirements, modernize outdated systems and improve process efficiency at all of their facilities.



## Benefits to Operating Companies

- *Advanced, proprietary technology*
- *Industry's best heat transfer performance*
- *Reliable and proven design*
- *Robust, long-lasting construction*
- *Easy access for repair and maintenance*
- *Fully customizable configurations*
- *Low total cost of ownership*
- *Comprehensive manufacturer service and support*

In order to maximize productivity and quality, it is essential to select the right type of equipment in any given process. Heat exchangers, commonly used to transfer energy from one medium to another, play a key role in a wide range of industrial heating applications.

Choosing an improper or inferior heat exchanger can lead to poor plant performance, equipment failure, and unexpected downtime.

## Rely on Honeywell Thermal Solutions

The Honeywell Thermal Solutions family of products includes Honeywell Combustion Safety, Honeywell Combustion Service, Eclipse, Exothermics, Hauck, Kromschroder and Maxon. We offer a comprehensive range of burners, heat exchangers, shut-off and control valves, air and fuel supply components, and other equipment for industrial heating processes that deliver safe, reliable, efficient, and clean heat.

Honeywell Thermal Solutions' best-in-class Exothermics line includes air-to-air sinusoidal plate type, dimple plate type, and tubular type heat exchangers. These units are known for robust construction—outlasting many competing products—as well as easy maintenance, greater fuel efficiency, and reduced total cost of ownership.

Honeywell Thermal Solutions customers gain tremendous energy savings because we provide extensive application knowledge and sizing expertise to help optimize their process through heat recovery.



## Diverse Applications, Innovative Solutions

The Exothermics line of heat exchangers are used by equipment manufacturers and industrial end-users around the world. They are a preferred choice in every field that uses heat to process, dry, cure, bake, or finish products.

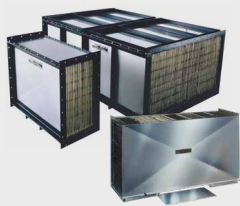
Honeywell Thermal Solutions offers reliable, high-efficiency heat exchangers for a wide range of industries:

- Agri-business
- Biofuels
- Building Materials
- Chemicals
- Food and Beverage
- Glass
- HVAC
- Hot Water and Steam
- Incineration—  
Fume and Bio/  
Solid Waste
- Metals
- Mining
- Oil & Gas
- Petrochemicals
- Pharmaceutical
- Power Generation
- Printing
- Automotive Paint  
Finishing
- Pulp & Paper
- Refining
- Rubber
- Textiles

# Rigorous Demands, Proven Products

It's important to partner with a supplier that truly understands your application demands, and has proven products to meet your individual needs.

Honeywell Thermal Solutions has decades of experience in the combustion market. We provide an array of heat exchanger models that use industry-leading technology.



### SP Sinusoidal Plate Heat Exchanger:

- Utilizes an exclusive sinusoidal plate design that provides maximum effectiveness and the

highest available performance

- Incorporates corrugated heat transfer plates to achieve a proprietary sinusoidal wave pattern
- Heat transfer is enhanced by using a counter-flow design
- Most cost effective heat exchanger design available
- Available in either aluminum or stainless steel.

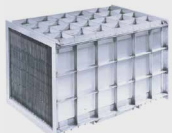


### HP Mini Stainless Steel Heat Exchanger:

- Designed specifically for low air volume systems requiring optimum heat recovery
- Features a removable access cover

on the exhaust airstream for easy cleaning and maintenance

- Provides superior structural and airstream integrity.



### DSP Dimple Plate Heat Exchanger:

- Ideal for both low- and high-temperature applications

- Configured for counter-flow or cross-flow operation
- Employs parallel plates formed with either staggered or inline dimple patterns to reduce the potential for particulate fouling
- Can be used in applications where flow may include particulates

- Insulated version utilizes a fully wrapped inner and outer case and 4-inch thick internal insulation for a maximum operating temperature of 1,500° F (815° C).



### TBR Tubular Heat Exchanger:

- Designed to effectively reclaim heat from catalytic incinerators, furnaces, thermal oxidizers, etc.

in high-temperature process and environmental applications

- Four customizable flow configurations available.

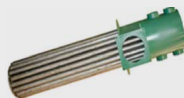


### Cross Flow Multi-tube (X-flow) Recuperator:

- Developed for applications that require the durability of a tube bundle heat exchanger and the improved

efficiency that comes with the increased exchanger surface area

- Features a 2,100° F face temperature and pre-insulated housing.








### Extern-a-Therm Recuperator:

- Compact tubular air-to-air heat exchangers

- Designed to recover waste heat in industrial exhaust gases
- Improves process efficiency by pre-heating combustion air
- Internally insulated housings eliminate need for additional external insulation
- Typically paired with an eductor for maximum waste heat recovery.

## Honeywell Applications for any Industry

	Product				
	Sinusoidal Plate	Dimple Plate	Tubular	Cross-Flow	Extern-a-Therm
					
Product Type	Heat Exchanger	Heat Exchanger	Heat Exchanger	Heat Exchanger	Heat Exchanger
Category	Plate Type	Plate Type	Tubular	Tubular	Tubular
Description	Sinusoidal Plate Heat Exchanger	Dimple Plate Heat Exchanger	Tubular Heat Exchanger	Plug-In Recuperator, paired with an eductor	Plug-In Recuperator, paired with an eductor
Key Markets & Applications	Heat recovery, preheating air, catalytic/recuperative thermal oxidizers, regenerative oxidizers	Heat recovery, preheating air, catalytic/recuperative thermal oxidizers, regenerative oxidizers	Heat recovery from catalytic incinerators, furnaces, thermal oxidizers, high temperature processes and environmental applications	Metals	Metals, Aluminum Crucible Furnaces
Key Differentiators	Exclusive sinusoidal design for maximum heat transfer and clean air flows; available in stainless steel or aluminum; cross-flow and counter flow designs available	Dimples can align or be offset to accommodate dirty process air flows	Most effective tubular heat exchanger on the market, preferred choice for high temperature heat recovery equipment	Fixed only on one end to prevent damage/stress, internally insulated housing so no need for external insulation, improve system efficiency up to 70%	Fixed only on one end to prevent damage/stress, internally insulated housing so no need for external insulation, improve system efficiency up to 70%

### Support When, and Where, You Need It

Honeywell Thermal Solutions' commitment to combustion system customers extends into your facilities through our Global Service Team of over 100 factory trained technicians, engineers, and support staff. Our technicians adhere to a strict SAFE working policy in the many industries we serve.

Available support solutions range from emergency assistance and ongoing combustion system service, to startup and commissioning, preventative maintenance, audits and testing, and workshops and training.

### For more information

The Honeywell Thermal Solutions family of products includes Honeywell Combustion Safety, Honeywell Combustion Service, Eclipse, Exothermics, Hauck, Kromschröder and Maxon. To learn more about our products, visit [ThermalSolutions.honeywell.com](http://ThermalSolutions.honeywell.com) or contact your Honeywell Sales Engineer.

### Honeywell Process Solutions

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### How Honeywell Can Help You

At Honeywell, we're dedicated to improving your industrial operation by optimizing the design and performance of its combustion systems. We know that the best performance requires calculation, planning and execution—starting with proper hardware selection, followed by installation and tuning—resulting in efficient operation.

Honeywell Thermal Solutions delivers the most comprehensive line of industrial and commercial thermal solutions on the market. Our extensive product portfolio spans from burners and controls, to valves and complete combustion solutions.