

# FRC Global Combustion Systems





**Expert Teams.**



**Quality Products.**



**Global Networks.**

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## Who We Are

FRC Global is a leading supplier of refractories, electrodes, and high temperature combustion systems. FRC Global provides outstanding results for our clients within the iron, steel, and non-ferrous industries. Our company's reputation is built by delivering high quality products made with premium raw materials. We are more global now than ever before.

We give you a competitive advantage by offering you superior proven products that positively impact your bottom line and perform better. Our knowledgeable engineers ensure the proper application of our products to give you the maximum level of output and safety.

With over 25 warehouse facilities in the United States, Canada, Mexico, and South America we assure your products are readily available when you need them in these regions.

**Through the use of vast global resources, all of us at FRC Global are committed to being the value creators and problem solvers for our industry.**

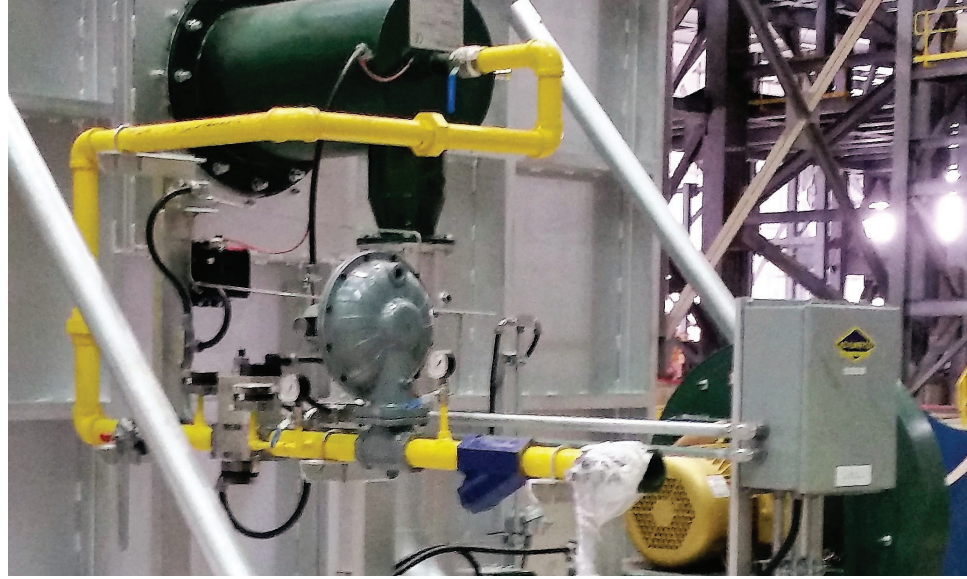
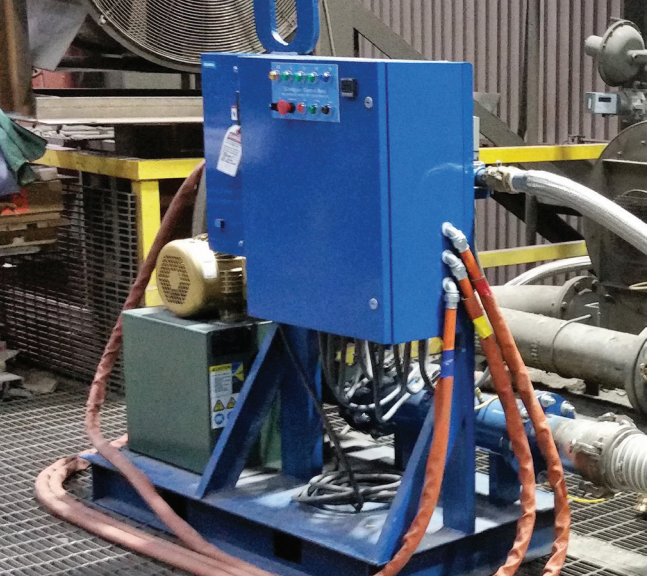


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## Our Mission

Embrace modern technology to increase innovation, efficiency, and transparency. Inspire the next generation by driving change, promoting curiosity, and shaping sustainable solutions in the high temp world.





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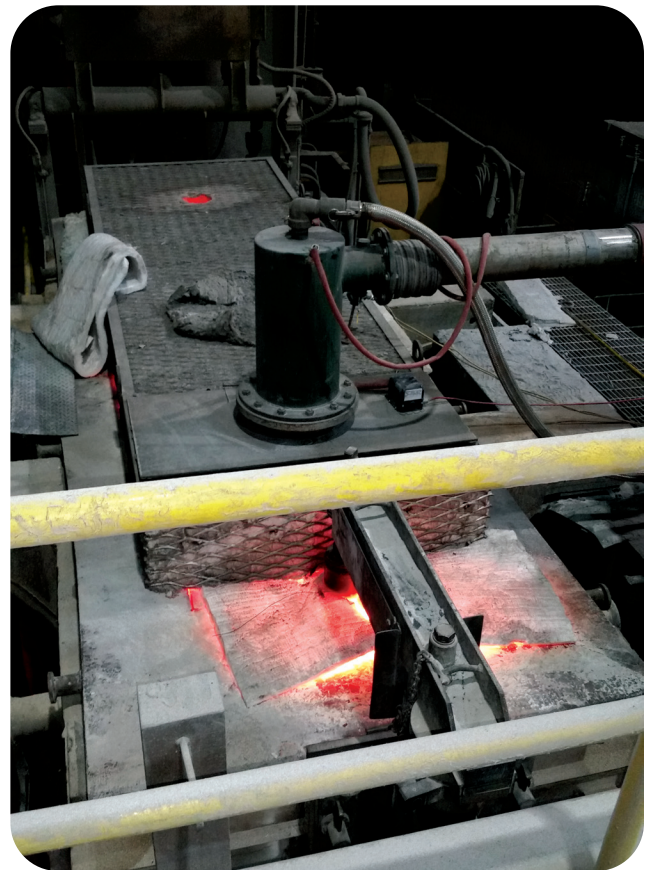
# About

**With the introduction of the Thermal Kinetic Energizer “TKE-HTT™” FRC Global offers you a competitive advantage with a proven technology that will positively impact your bottom line and perform better.**

TKE-HTT™ offers the steel industry another opportunity to join the green movement. Steel mills are known for high energy consumption and high levels of emissions. The cost of energy in the steel industry is 15-20% of the total manufacturing cost.

The TKE-HTT™ reduces natural gas consumption by 50% or more. It also reduces hazardous emissions making it a better choice for your environment.

Our knowledgeable engineers ensure the proper application of our products to give you the maximum level of output and safety.





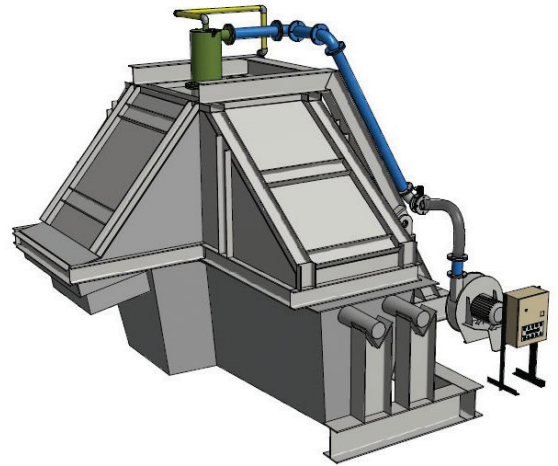
# Product

## TKE-HTT™

FRC Global represents the TKE-HTT™ Technology in North, Central and South America.

The TKE™ is a revolutionary system used in industrial heating to replace conventional gas burners. The TKE™ uses a small amount of natural gas to power a stream of molecules traveling at 220m/second resulting in the direct transfer of kinetic energy to heat. The energy transfer produces uniform heat within the vessel, work piece or heat exchange system while reducing the harmful emissions associated with a conventional burner system.

This proprietary Thermal Kinetic Energizer Heat Transfer Technology applies to all industries using a direct-fired, forced-draft heating apparatus.



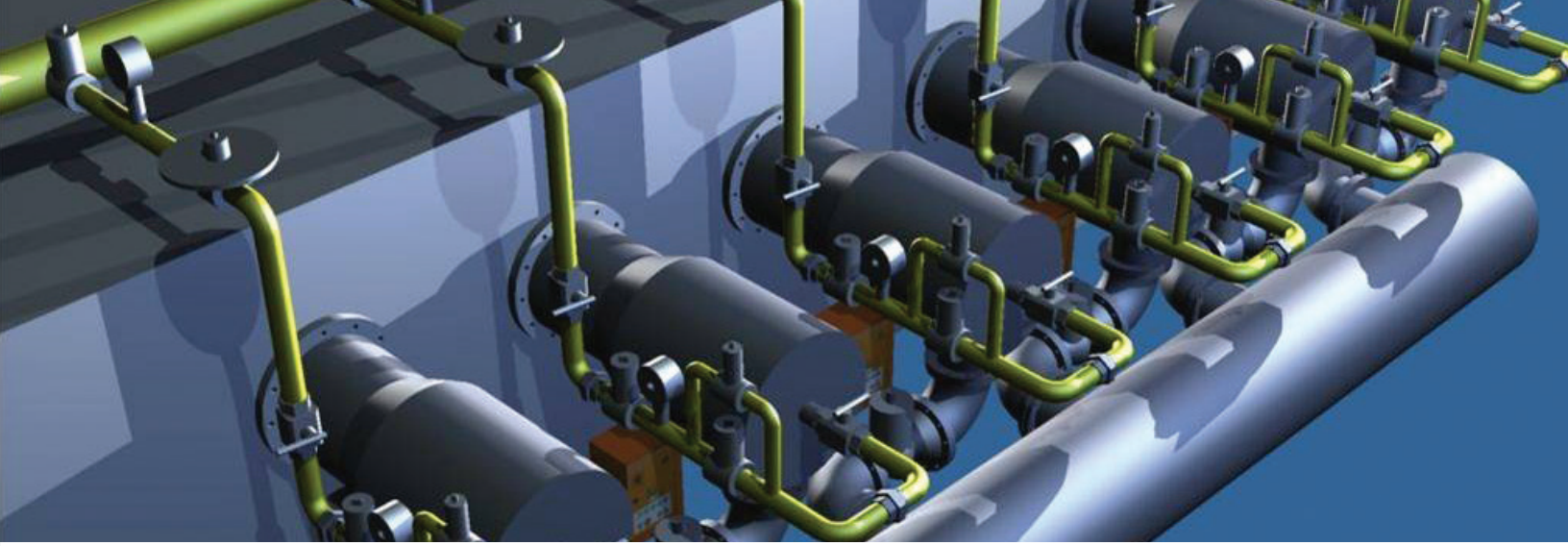
# Features and Market Sector

## Applicable Market Sectors

Heating Apparatus	Direct Fire + Forced Draft /Max Temp 1350°C/2462°F
Pre-heaters/ Refractory Heating	Steel ladles
	Tundishes

## Features

- The TKE™ system replaces traditional burners with little disruption in production during retrofit installations.
- System is designed for operation in most heating applications from 200°C (392°F) to 1350 °C (2462°F).
- A single TKE™ may replace multiple conventional burners.
- Natural gas and propane may be used as the energy source.
- Complete combustion within the TKE™ produces a focused stream of energy resulting in the heating of the work piece, charge, furnace, or oven.
- The complete combustion of fuel within the TKE™, and less fuel consumption creates less emissions.
- The system produces the same heating effect as conventional systems with greater uniformity and penetration.
- The TKE™ may be mounted in any position and at any angle in the furnace or preheater.
- No recuperated air is required as the system eliminates the need for that system entirely.
- The TKE™ operates using a low-pressure gas supply.
- The TKE™ requires less forced air supply volume due to the reduction in required gas flow, resulting in reduction in electricity.
- An easy to learn control system minimizes training and routine monitoring by operators.
- The control system requires virtually no routine maintenance.
- No moving parts within the TKE™ emitter unit.
- A single spark plug supplies the ignition.
- Full on/off pulse fire system operates at maximum efficiency.
- FRC Global controls, components, and system operation are engineered to meet NFPA 86 standards.

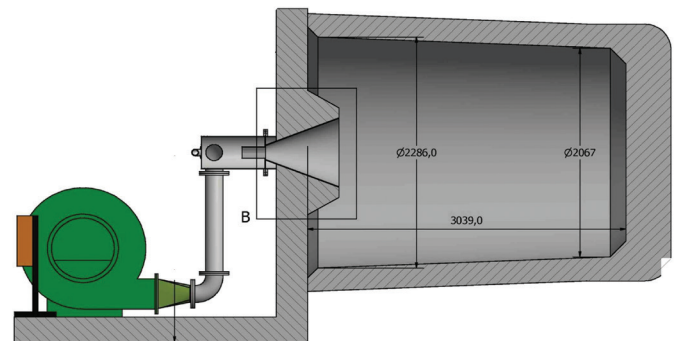
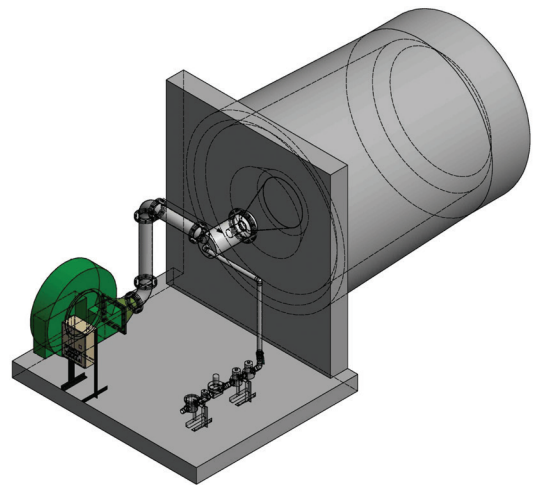


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# Benefits

## Benefits of installing the TKE-HTT™

- A reduction in fuel consumption of 50% or greater.
- Overall reduction of emissions due to reduced fuel consumption.
- A reduction in heat processing times.
- Lower temperatures may yield the same results.
- Near Zero Delta T between environment and the vessel, charge or work piece.
- Temperature uniformity.
- Elimination of thermal stress, reducing cracking and deformation of the work piece.
- Faster ramp up time.
- An increase in heating system reliability





# High Temp Innovation

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