

STELLA™ FLARE IGNITION SYSTEM

The STELLA™ Flare Ignition System by John Zink is engineered to enhance operational efficiency and sustainability in industrial processes. As a Koch Engineered Solutions business, we are committed to driving sustainability and innovation in combustion and emissions technology through the development of energy-efficient products like the STELLA Flare Ignition System.

STELLA uses an advanced spark ignition system to reliably ignite flare burners without continuously burning pilots, saving on gas consumption and maintenance costs. STELLA is reliable, with ignition from minimum flare gas pressure to sonic operation. Pilot gas and electrical power may not be readily available in all situations, so this technology is well-suited for flares at remote oil and natural gas production sites.

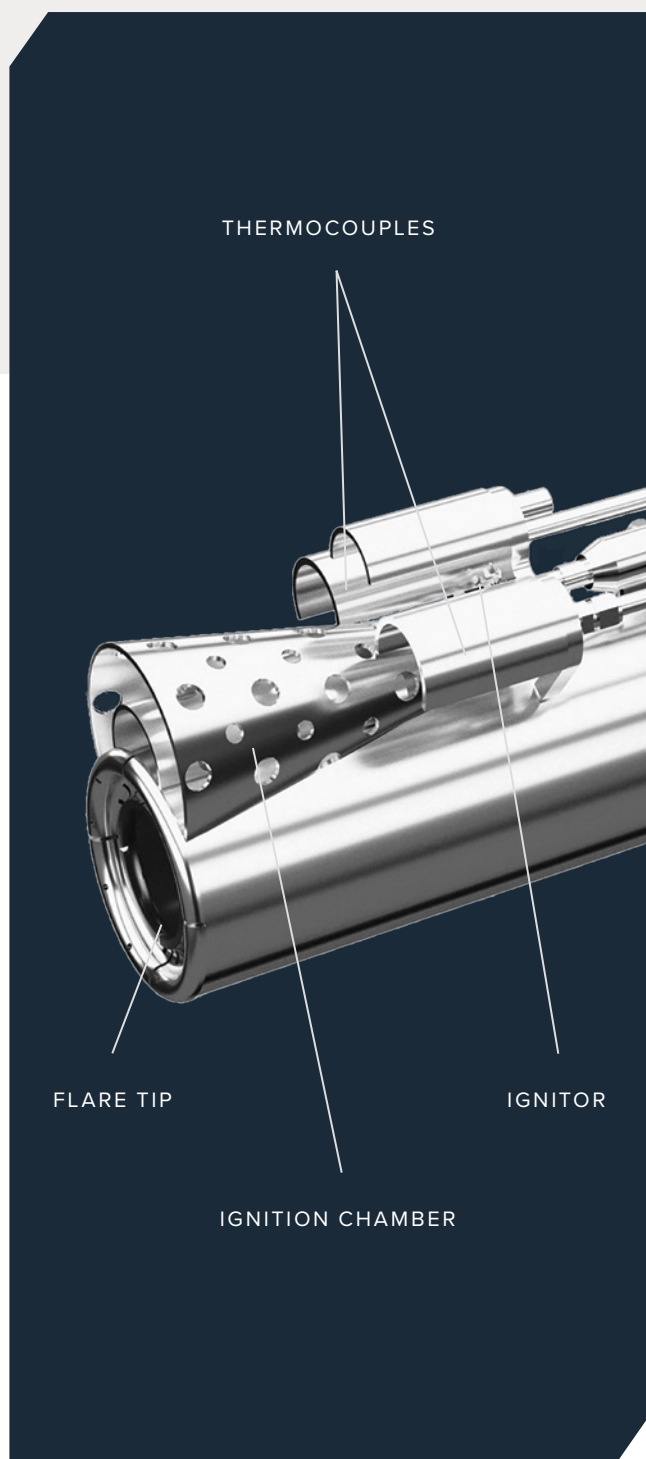
STELLA consists of two primary modules. The first module is a custom-designed STELLA spark system. The geometry of the STELLA spark system ensures a reliable and consistent spark is available to ignite the waste gas.

The second module is a proprietary waste gas slipstream ignition chamber. The slipstream ignition mixes a small amount of waste gas with air, ensuring a stable flame exists to light the waste gas.

Because STELLA is designed to operate without continuously burning pilots, no pilot gas supply infrastructure is needed. It is compatible with various types of ignition systems, including solar-powered, battery-operated and hardwired ignition systems, both permanently installed and portable.

TYPICAL APPLICATIONS

STELLA is an excellent, low-CAPEX option for vertical flare applications, horizontal flare applications such as burn pits, and it is compatible with many different types of flammable hydrocarbon waste gas.



Meeting Regulations. Driving Innovation.

As hydrocarbon processing companies continue to prioritize energy efficiency and emissions reduction, John Zink supports their efforts with high-performance, low-emission technologies that meet the demands of evolving regulations and sustainability initiatives. Solutions like STELLA™ emphasize our commitment to providing new, technically advanced flare products that optimize performance, enhance reliability and minimize waste.



DESIGN

The design of the STELLA Flare Ignition System is engineered to conserve gas and save on costs associated with standard ignition systems.

Reduced Utility Consumption

- STELLA operates fully on electricity.
- No pilot fuel gas or instrument air is required for operation.

Reduced Maintenance Costs

- STELLA doesn't have any valves, piping, regulators or instruments to maintain.
- There are no expensive, consumable flare pilot systems to be replaced.
- The quality stainless steel components provide a long operational life at high temperatures.

Significant CAPEX Reduction

- STELLA significantly reduces CAPEX by eliminating:
 - Hundreds of meters of fuel gas piping
 - Pilot fuel rack with associated equipment and piping
 - Civil works for fuel gas pipe routing
 - Propane fuel gas bottles
 - Project engineering and design hours

PERFORMANCE

The STELLA Flare Ignition System delivers a reliable, high-performance operation with proven flexibility across various conditions.

Reduced Emissions

- Without the need for pilot gas combustion, STELLA lowers your CO₂ emissions.

Operational Flexibility

- STELLA functions in both horizontal and vertical orientations.
- It has been successfully tested over a wide range of flow rates with multiple waste gas compositions.
- STELLA is compatible with many types of control systems, including both grid and battery power with solar charging.

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