



# STEAM ASSISTED FLARE

COMBUSTION AND ENVIRONMENTAL SOLUTIONS.  
PURE AND SIMPLE.®

**QFS Series**



*QFS Steam Assisted Flare*

## **Control Smoke With Reduced Noise.**

The ZEECO® QFS Series flare tip is a proven, affordable technology that utilizes steam injection to suppress smoke in a flare system. The injection of steam inspirates air into the combustion zone and provides turbulence to mix the air with the waste gas for smokeless combustion. The steam also lowers the local combustion temperature, reduces the high-temperature thermal cracking of many hydrocarbons, and eliminates incipient smoke. The proprietary QFS steam nozzle uses a number of injection ports to successfully reduce steam injection noise to a level well below that of conventional steam assisted flare tips. The impact of steam injection at the flare tip exit point is critical for more than just smokeless performance. The steam also “shapes” the flare flame in high wind conditions, eliminating the downwind flame impingement seen on many non-assisted flare tips. The steam also helps reduce the radiation level at grade by lowering the emissivity of the flare flame and by providing vertical energy to keep the flame erect in a crosswind.

## **Unique Tab Design Ensures Stability.**

The QFS Series flare tip assembly utilizes the unique arrangement of proprietary flame stabilization tabs to ensure stable and high-efficiency flaring through the entire design range of flows, from maximum emergency flaring rates to purge gas flows. The flame stabilization tabs create a low-pressure zone at the perimeter of the flare tip gas exit point and work in conjunction with continuous pilots to ensure proper ignition of the waste gas. Zeeco's tabs are unique investment castings that are mounted to the flare barrel using plug welds, eliminating stress risers and cracking associated with linear welding in high heat zones.

## **Why Choose Zeeco?**

Zeeco leads today's global market in the design of combustion equipment. Our engineers have the experience, knowledge, and tools to properly size and design any flare, anywhere. ZEECO flare systems have been operating around the globe for over 30 years. Our philosophy of providing customers with superior quality, on-time shipments, and competitive pricing is the cornerstone of our success. Let us put our experience to work for you. Call or email us today to learn more about the full line of ZEECO flare products and replacement components for your new or existing flare system.





BURNERS



FLARES



INCINERATORS



PARTS & SERVICE

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# Steam Assisted Flare

## Applications

- Refining, petrochemical, chemical, pulp and paper plants, pharmaceuticals, food processing plants
- Where smokeless flaring is desired and steam is available
- Bolt on replacement for other manufacturers' flare tips

## Advantages

- High efficiency, low noise smokeless performance
- High stability, low fuel consumption pilots are standard
- 98.5% or higher hydrocarbon destruction efficiency
- Superior materials and construction features

## Features

- Sizes from 2 inch (50 mm) to 120 inch (3050 mm)
- Most economical steam assisted flare for general use
- Multi-port investment cast steam nozzles for lowest possible noise
- Steam nozzles engineered for optimum air inspiration and mixing
- Suitable for use with 50 psig (3.45 barg) to 250 psig (17.25 barg) steam
- High stability pilots (Tested to 150 mph [241 Km/hr] windspeed)
- Critical parts supplied as investment castings
- 310 stainless steel in high heat areas



Steam Skid



QFS Steam Assisted Flare Tips

CERTIFICATIONS APPLY TO ZEECO HEADQUARTERS ONLY.



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NBBI



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ASME



CERTIFIED  
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REGISTERED  
ISO 9001: 2008

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