



# LOW NOISE / HIGH EFFICIENCY STEAM ASSISTED FLARE

COMBUSTION AND ENVIRONMENTAL SOLUTIONS.  
PURE AND SIMPLE.®

## HCL Series



*HCL Flare Tip on Truck for Delivery*



*HCL Low Noise / High Efficiency Steam Assisted Flare*



*HCL Steam Assisted Flare*

### SMARTER STEAM INJECTION REDUCES SMOKE.

The ZEECO® HCL series flare tip provides control of smoke in a flare system through the engineered injection of steam and inspired air. Zeeco's unique design moves the steam injection nozzles away from the heat of the flare flame and into a position where a noise shroud can be engineered to muffle the steam injection jet noise. The HCL series flare tip uses a system of internal steam/air tubes to route a steam/air mixture from the steam injection manifold up the interior of the flare tip, then discharges this steam/air mixture directly into the interior of the flare gas column as it exits the flare tip. The steam/air mixture is injected at numerous points across the diameter of the flare tip – not just from the tip's exit perimeter. This design can reduce the steam required for a particular smokeless rate by 35% or more.

### LOWER NOISE AND RADIATION LEVELS.

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 lower 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. The HCL series can reduce the overall steam injection noise level by 10-12 dBA compared to conventional steam flares. The muffler absorbs much of the noise produced from the steam nozzles while directing the noise upward, rather than down or outward to the surrounding area. The HCL series flare tip assembly comes standard with the largest steam/air injection tubes available, and each steam/air tube is equipped with investment cast inspirators on the inlets as well as highly reinforced investment cast discharge nozzles on the tube outlets.

### 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

COMBUSTION AND ENVIRONMENTAL SOLUTIONS.  
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# Steam Assisted Flare

## APPLICATIONS

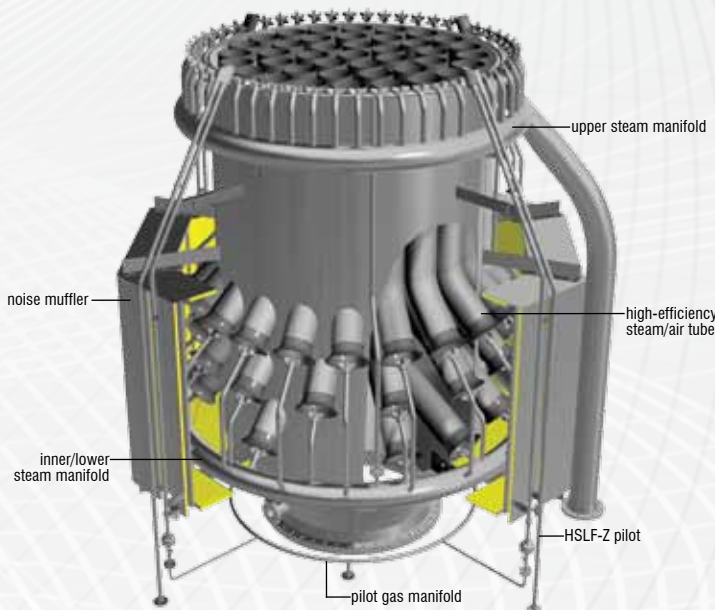
- Refining, petrochemical, chemical, pulp and paper plants, pharmaceuticals, food processing plants
- Where smokeless flaring is desired and steam is available
- Where lower noise and higher smokeless rates are desired
- Bolt on replacement for other manufacturers' flare tips

## ADVANTAGES

- Highest possible smokeless efficiency in a steam assisted flare
- Lowest possible noise level from a steam assisted flare tip
- High stability, low fuel consumption pilots are standard
- 98.5% or higher hydrocarbon destruction efficiency
- Superior materials and construction features for maximum life
- Flare gas exit area has access to multiple pilots for ignition

## FEATURES

- Sizes from 12 inch (305 mm) to 120 inch (3050 mm)
- Internal steam/air injection tubes with engineered inlets
- Lower steam injection manifold with engineered noise shroud
- Multi-port investment cast steam nozzles for lowest possible noise
- Steam nozzles engineered for optimum air inspiration and mixing
- Suitable for 50 psig (3.45 barg) to 250 psig (17.25 barg) steam
- High stability pilots (Tested to 150 mph [241 Km/hr] windspeed)
- Minimum 98.5% hydrocarbon destruction efficiency



HCL 3D Model

CERTIFICATIONS APPLY TO ZEECO HEADQUARTERS ONLY.



CERTIFIED  
NBBI



CERTIFIED  
ASME



CERTIFIED  
ASME



REGISTERED  
ISO 9001: 2008

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