Easy installation and operation on demand.
Zeeco maintains a rental fleet of skid and trailer-mounted vapor combustor units (VCU) staged around the world and available on demand. Designed with the end user in mind, our rental vapor combustors offer easy operation and installation within a matter of hours. Whether you need a simple skid-mounted design, or a fully-automated, trailer mounted ZEECO® Zephyr™, users depend on our proven, reliable smokeless solutions.

Wide range of applications.
Each Zeeco vapor combustor is engineered to operate safely through a wide range of relief conditions. From low flow and low pressure hydrocarbon gas streams to contaminated air streams, Zeeco’s high capacity rental vapor combustor systems provide clean flames, consistent smokeless operation, and high destruction efficiencies.

Meet regulatory requirements.
Zeeco's vapor combustors are fully enclosed to efficiently use both combustion and quench air. The combustion enclosure maintains precise chamber temperatures and ensures optimal destruction and removal efficiencies (DRE) to meet or exceed the most stringent clean-air standards. Our vapor combustor can be fully automatic or manually operated, depending on your specific needs and regulatory requirements. Typically used in liquid loading and tank degassing operations to destroy harmful emissions that emanate from fumes, vapor combustors fill diverse roles and can be used in multiple applications while maintaining optimal efficiency.

Advanced technology.
Zeeco is a pioneer in smokeless flare and vapor combustor system design. We put our nearly 40 years of experience into our rental system designs to ensure our customers benefit from the best available technologies. ZEECO ProFlame™ flame scanners provide reliable flame detection using state-of-the-art digital signal processing for easy flame analysis, and offer an intuitive display for easy setup and installation. ZEECO Guardian™ wireless monitoring system allows operators to check on the system from anywhere via remote diagnostics and controls.

ZEESCO Zephyr™ Trailer Mounted Vapor Combustor
Design Features

- Wide range of flow rates, including up to 4800 gpm for vapor loading
- Destruction efficiencies up to 99.99% with sample ports for testing
- Full turndown capability
- Smokeless performance from 0% to 100% operation
- Completely hidden flame and zero emitted radiation
- Flame arrestors on inlet for flashback prevention
- Automatic on/off operation for loading facilities based on pump operations
- Interchangeable tip designs for broad relief conditions
- Staged air assist by forced draft to facilitate better mixing and stoichiometric combustion at the burner assembly
- Natural draft dampers for chamber combustion air and temperature control of vapor combustor
- Internal ceramic fiber refractory lining
- Thermowell and thermocouple for temperature monitoring of combustion chamber
- Fully automated controls system for automatic flame ignition and monitoring with electric or solar power
- Retractable pilot can be removed and maintained without shutting down
- DOT-compliant trailer-mounted option for easy transportation
- Trailer option with hydraulic outriggers and stack lift system for simple setup without need for cranes
- Skid mounted option for longer-term usage periods
- Can be used as a thermal oxidizer, flare, or vapor combustor to meet local regulations and existing permits

Options Available

- Anti-flashback burner tips for flashback protection
- ZEECO Guardian™ for wireless monitoring and operation
- ZEECO ProFlame™ flame scanners
- Flame and detonation arrestors
- Assist gas for maintaining internal operating temperatures for high DRE
- Forced draft fan for smokeless operation
- Vapor blower for low/no pressure gas operation
- Solar-powered ignition system
- Auto or manual spark ignition
- Knock out drums and instrumentation
- Integrated dock safety system loading applications