

# DUCT BURNER SOLUTIONS

## EXPERIENCE

For decades, cogeneration projects, electrical utility peaking stations and industrial plants have counted on our expertise in duct burners. Through our Coen and Hamworthy Combustion brand products, John Zink is world-renowned for reliability, efficiency, and innovation in combustion system applications and installations. We have been an innovative force in combustion systems — delivering technological expertise, design excellence, practical application and quality research and development with proven performance. Today, we continue the advancement of combustion equipment and technology to meet existing and emerging challenges in markets around the globe.

We are a world leader in the design and development of duct burner systems engineered for the highest performance and lowest emissions on modern, high-efficiency turbines. John Zink duct burner systems for combined cycle and process installations provide for higher steam production at lower, more uniform temperatures with a rugged, durable design to meet your performance and emissions requirements. We offer duct burner solutions for a range of applications and fuels.

## Advanced Research, Development & Testing

Our progressive design engineering and product development includes leading-edge burner testing, simulation and modeling techniques, offering an in-depth analysis of current combustion systems as well as engineered solutions to maximize performance.

## Research and Development

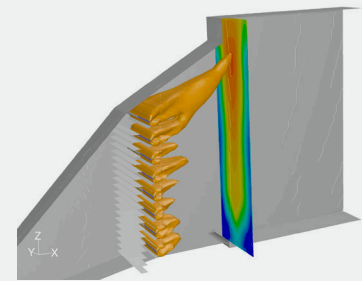
Our three research and development test centers make up the largest and most advanced testing complex in the industry. These exclusive resources allow us to push innovation and gain expertise while measuring performance in a full-scale setting, replicating near real-world conditions.

## Modeling Services

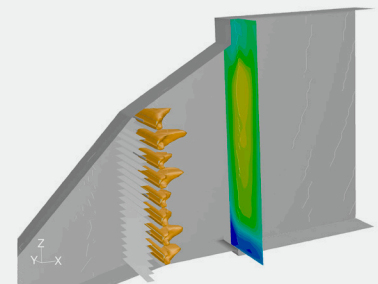
Using state-of-the-art computational fluid dynamics (CFD) modeling techniques, we can maximize your facility's operating performance and achieve your emission requirements. With CFD analysis, we can predict and improve system performance through optimization of: flow distribution, flame characteristics, temperature profile and pollutant formation.



## Performance Improvements Through CFD Modeling



Flue-gas envelopes and predicted downstream temperatures for original installation



Flue-gas envelopes and predicted downstream temperatures after field modification

For more than a century, the Coen and Hamworthy Combustion brands have stood for the most advanced science and technology in oil and gas combustion. Today, Coen and Hamworthy Combustion products are a part of John Zink, where we combine our technological expertise, vast resources and industry experience to provide the world's most advanced selection of innovative duct burner solutions. This includes burner, igniter and safety systems and ancillary products. All designed to deliver optimal environmental and economic performance.



## Custom Engineering and Superior Service

With innovative technology solutions and extensive experience from a significant installed base, our engineering experts have the resources to meet your combustion needs. From fundamental burner products to complex systems and complete package options, we develop customized combustion solutions for your specific application, helping you meet even the toughest requirements. After installation, our team of dedicated in-house engineers and our network of factory-trained field technicians are available worldwide to provide immediate evaluations and service, keeping your system performing reliably and efficiently for years to come.

- Installation supervision and start-up assistance
- Emissions compliance pre-testing
- Instrumentation calibration for efficiency and safety
- Inspections and preventative maintenance
- Emergency service and spare parts
- Parts recommendations and equipment evaluations
- Operator training / education

**Contact us today to learn more about innovative duct burner solutions and ancillary products to improve the safety and performance of your operation.**

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