

# Combustion Designs, Inc.

## Engineering Advanced Burner Management and Control Packages

Designing effective and safe burner management and control systems requires intimate knowledge of, and vast experience in, the field of industrial combustion. And while independent knowledge of control packages and all the applicable compliance standards that govern boiler operation is imperative, it is our unique ability to apply them in harmony such that the end result both practically and effectively supports the needs of the end-user that sets us apart from our competitors.

Since 1972, Combustion Designs, Inc. has specialized in all aspects of industrial-sized combustion applications, specifically; boilers, high temperature hot water generators and hot oil heaters ranging from 10,000 PPH to 300,000 PPH and burners capable of providing 1 mm/BTU/hr to 300 mm/BTU/hr. We have provided equipment to over 400 major installations in the state of New York as well as locations throughout the United States and in South America. Our typical customers include:

- State and Federal Installations
- Higher Education
- Private Industry (e.g., pharmaceutical, pulp & paper, canning, process, etc.)
- Health Care / Hospitals
- Electric Utilities
- Goods Manufacturing

Whether the need is for an individual micro-processing controller capable of managing a single function, or an elaborate data acquisition & control system managing an entire complex, we have the knowledge and experience to successfully meet the challenge. Additionally, and unlike many of our competitors, Combustion Designs is uniquely positioned such that we have experience with and access to a wide variety of controller, PLC and software manufacturers, ensuring our customers have access to the specific product line that best suits their individual needs.

### EXPERIENCE IN:

- PLC Design & Operation
- Distributed Control Systems
- SCADA & HMI
- Ladder Logic & Function Block
- Single/Multi-Loop Micro-processing Controllers
- System Control Incorporating Lead/Lag & Biases
- Multiple Burner Sequencing
- Existing Panel Retrofits
- System Integration
- Required Compliance Standards
- Data Reporting & History Trending

### COMBUSTION ENGINEERING

At Combustion Designs we excel in helping our customers integrate and optimize solutions for even the most complex engineering problems. We regularly provide design and engineering services for a wide variety of needs, including complete system design, burner management and safety systems, control packages, burner retrofits, feed water systems, fuel supply systems, and duct engineering. We also have significant industry experience in system-wide efficiency upgrades, energy audits and emission control technologies.



Micro-processing Controllers



Process Control Panel



Example Touch Screen HMIs

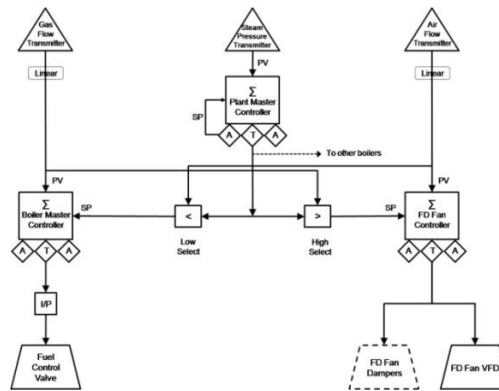
# The Highest Grade of Combustion Control Equipment and System Engineering

Combustion Designs specializes in offering customized control and safety systems based on the specific plant requirements; however, regardless of the complexity of the requirement our systems are all engineered around three basic principles; safety, reliability and efficiency. Other suppliers who may cut corners on one of these principles strictly to reduce costs cannot compare to us, nor can we be surpassed by generic control companies who lack intimate knowledge and understanding of the field of industrial combustion.

Combustion Designs offers a wide range of management and safety logic systems for use with all fuels and in all burner applications; from single burner systems to multi-burner and multi-fuel operations. Regardless of the size and complexity of the job, all of our engagements begin with a system-wide review to ensure safety and code compliance as well as to identify any opportunities to maximize efficiency. All programming and design features of our burner management and control systems strictly adhere to safety compliance standards, including ASME, NFPA 85, 8501 & 8502, FM Global, IRI, UL and NYS Codes 4 & 14. Additionally, any control panel we manufacture meets or exceeds applicable NEMA specifications. From there we leverage our vast industry experience to provide our customers a solution that is both practical and effective, be that for an uncomplicated single control loop or a complex Burner Management and Safety System controlling multiple burners and boilers simultaneously.

Other services available from Combustion Designs include:

- System Design
- Control and Safety System Packages
- Efficiency Studies & Burner Performance Testing
- Energy Audits
- Training
- Project Management & Oversight
- Maintenance
- Start-up Support



SAMA Diagram for Metered Control

## SALES

Our staff has the experience necessary to help you develop the right solution for the problem at hand, and it is our goal to provide each customer the most efficient and effective solution possible. Whether fulfilling that need means meeting the unique specifications of a brand new installation or providing the most basic replacement part for an aged system, Combustion Designs has the in-house expertise necessary to complete the job to your satisfaction.

## SERVICE

Combustion Designs supports all of our customers with a wide range of exceptional service options. From combustion tuning for burners firing traditional fossil fuels to troubleshooting the most complex system-wide problems, we have the unmatched industry experience to successfully meet the needs of our customers. Our personnel regularly perform system upgrades, safety system testing, and system integration activities, as well as efficiency testing, burner performance testing and emergency service work.

