



Honeywell's Maxon Equipment and Valves

**THE SMART CHOICE FOR VALUE,  
RELIABILITY AND PERFORMANCE**

# Comprehensive Combustion Solutions

Maxon, a Honeywell company, is an industry leader in manufacturing a comprehensive line of combustion equipments to meet critical heating requirements of virtually every industrial process. Maxon burners are designed in a variety of configurations to heat air streams, liquids, ovens and furnaces with outstanding efficiency, reliability and performance. Maxon also offers combustion control valves, viz. Shut-Off valves and Control valves. These present many operational advantages – for instance, the shut – off valves are designed with precise micro- lapped seats to help prevent leakage and are engineered and tested for life cycles of 1,000,000 closures. This type of performance leadership along with excellent expertise and customer focused approach has made Maxon a highly trusted and sought after name in combustion products worldwide –serving a multitude of industries in a multitude of applications.

**FOOD PROCESSING**

**PULP AND PAPER**

**GLASS & CERAMICS**

**TEXTILES**

**AUTOMOTIVE**

**FERROUS &**

**NON FERROUS MELTING**

**CHEMICAL BAKING**

**PETROLEUM**

**MELTING**

**CURING**

**DRYING**

**HEAT TREATING**

## The MAXON Advantage

### Innovation Leader:

Maxon's leadership in innovation goes back to 1916, with the introduction of PREMIX burners that revolutionized industrial heating. Since then, this leadership has continued in industrial process heating through consistently pioneering new technologies, manufacturing techniques and product designs that exceed performance and environmental requirements of the changing industrial world.

### Global Presence

Maxon has one of the broadest and strongest international networks of support in industry with 54 locations across United States, Europe and Asia. This has resulted in an unparalleled manufacturing, engineering and sales support for all Maxon customers everywhere - on time, every time.

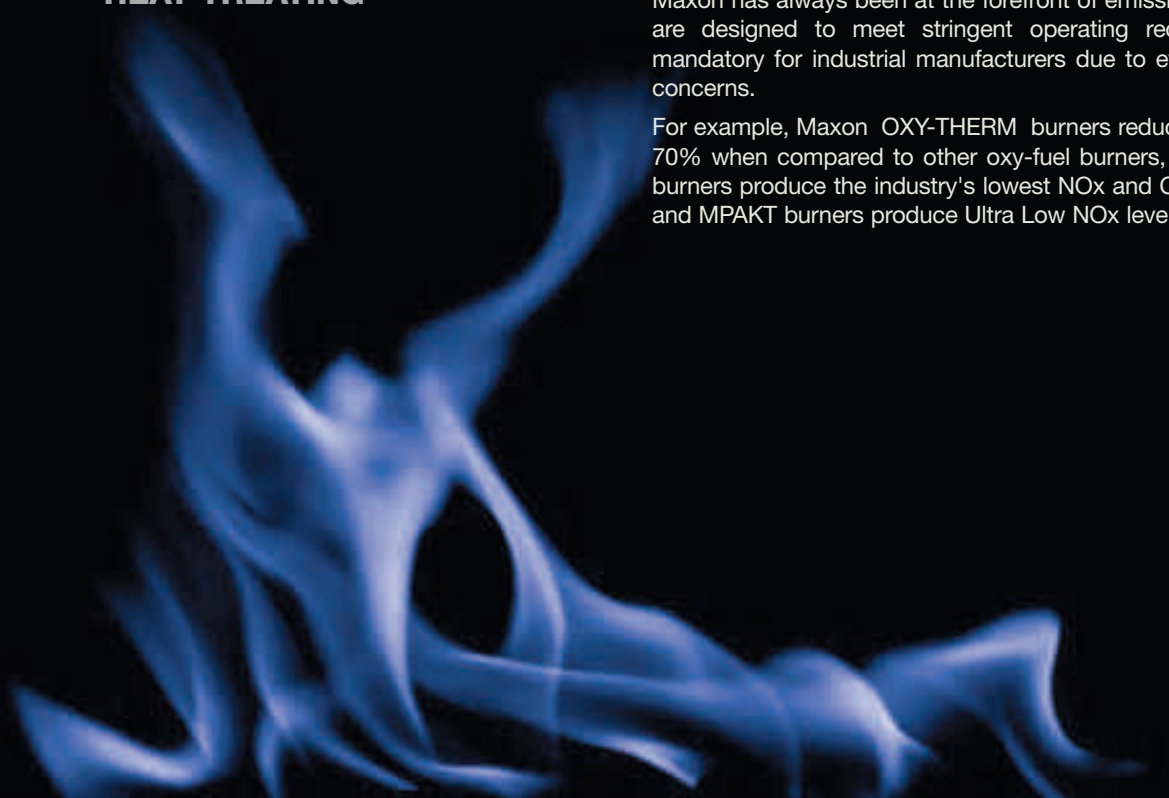
### Commitment to Quality

Maxon aims at ensuring the most consistent and highest quality products in the industry that exceed customers' expectations each and every time. This commitment to quality has earned Maxon the distinct honor of being the first industrial burner manufacturer to receive ISO 9001 Certification, a world wide standard for excellence.

### Environment Friendliness

Maxon has always been at the forefront of emission control. Maxon burners are designed to meet stringent operating requirements that are now mandatory for industrial manufacturers due to ever growing environmental concerns.

For example, Maxon OXY-THERM burners reduce emission levels by up to 70% when compared to other oxy-fuel burners, while Maxon CYCLOMAX burners produce the industry's lowest NOx and CO levels, and the OPTIMA and MPAKT burners produce Ultra Low NOx levels.



Maxon line burners have been specifically engineered for air heating applications. The modular line design allows burner sections to be assembled to meet virtually any configuration and/or length requirement while maintaining excellent temperature distribution in the duct. Raw gas, Pre-Mix and Nozzle Mix line burners are all available.

## Line Burners

### Raw Gas Line Burners

Maxon raw gas burners require no external combustion air source because, as the air stream passes through the profiled mixing plates and meets with the fuel, the resulting turbulence helps create very clean and efficient combustion. Emission rates are available to meet a variety of applications.

Applications include: Curing, baking, paint and print drying, paint baking, fume abatement and many others.



COMBUSTIFUME® Burners

- Incineration of combustible gaseous effluents from coil coating lines, textile dryers, printing-presses, paint baking, etc.



HC AIRFLO® Line Burner

- Turbine exhaust reheater for co-generation system
- High capacity air heating applications



“NP”, “LV” & “RG” AIRFLO® Line Burners

#### NP", & "RG" AIRFLO® for fresh air heating

- Direct Heating Of Fresh Air: Makeup Air; Paint Spray Booth Air Supply
- Print & Drying Of Agricultural Products, Chemicals, Textile
- Baking, Oven Heating

#### LV AIRFLO® for low oxygen content streams

- Turbine Exhaust Has Reheating
- Paint Bake Ovens
- CoilCoating
- Incineration
- Burner Design Allows Partial Pre-mix (for  $O_2 < 12\%$ )

### Premix & Nozzle Mix Line Burners

Premix line burners are designed for use in recirculation air streams having very low oxygen content or inert flows.

Nozzle Mix line burners are designed for air and process heating applications. Both types of Maxon burners can provide the uniform and consistent temperatures that are crucial in many processes.

Applications include: Textile, print and board drying, food and chemical spray dryers, baking ovens, and many others.



LINOFLAME® Line Burners

- Textile Drying
- Heating Of Moving Strip Or Web
- Tempering Ovens
- Vessel Heating
- Strip Annealing



LO-NOX™ Line Burners

- Food Industry: Spray Dryers and Baking Ovens

Maxon offers one of the broadest lines of nozzle-mix burners in the industry. These refractory-less units feature advanced nozzle designs and provide the advantages of high turn-down ratios, low emission outputs, and the ability to operate efficiently in high air turbulence. Applications include: air heating, paint finishing, fume incineration, ovens, fluid/tank heating and many others.

## Nozzle Mix Burners



OVENPAK® 400 Burner

- General, Chemical, Paper & Ink Dryers
- Metal Finishing
- Food, Bakery & Paint Bake Ovens
- Yankee Hoods
- Textile Tenter Frames
- Coffee Roasters
- Fume Incinerators
- Printing Machines
- Indirect Heating



TUBE-O-THERM® Burner

- Dye Vats
- Pickling Tanks
- Spray Washers
- Dip Tanks
- Indirect Air Heaters
- Indirect Bakery



APX® Burners

- Make up air heating such as mine shaft ventilation, automotive spray booths, and combination spray booths/ovens.
- Catalytic oxidizers, print dryers



CYCLOMAX® Burner

- Dryers (general)
- Food Ovens



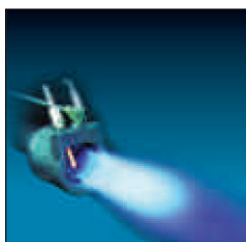
MEGAFIRE® Burner

- Yankee Hoods
- Bone Meal Dryers
- Grain Dryers
- Start-up burners for fluidized bed combustion systems



Circular INCINO-PAK® Burner

- Thermal incineration of combustible gaseous effluents



PILOTPAK™/STICKTITE™

- Ladle Heaters
- Solution Heating
- Small Air Heaters



VALUPAK® (Europe Only)

- Textile Machines
- Printing Machines
- Other types of dryers

While the burners in this line have the capabilities to produce extremely high temperatures (KINEDIZER has a range of 146 kW to 11,700 kW), some offer the lowest certified emission rates in the field. Applications include: heat treatment furnaces, paper, printing and board dryers, glass melting furnaces, smelters, oxidizers, calciners and many others.

## High Temperature Nozzle Mix Burners



OXY-THERM®

- Glass Melting Furnaces
- Frit Melting Furnaces
- Ceramic Kilns
- Metal Melting Furnaces



MULTIFIRE® Burner

- Coffee Roasters
- Catalytic Or Thermal Incinerators
- Paper, Printing, Textile Drying
- Board Dryers
- Grain Dryers
- Carbon Rod Baking



WIDE-RANGE® Burners

- Heat Treatment Furnaces
- Smelters
- Incinerators
- Calciners
- Carbon Rod Baking Furnaces



UNI-RAD® Radiant Tube Burners

- Indirect Furnace Heating



Sealed Nozzle

- Heat Treatment Furnaces
- Smelters
- Incinerators
- Calciners
- Carbon Rod Baking Furnaces



KINEMAX® Burners

- Heat Treatment Furnaces
- Incinerators
- Ceramic & Melting Furnaces



RAMFIRE® Burner

- Heat Treatment Furnaces
- Ceramic & Melting Furnaces
- Lehrs



KINEDIZER® Burner

- Incinerators
- Process Dryers



Designed for use with Maxon premix burner systems, these mixing devices thoroughly blend air and gas for optimum performance. They can be used with most clean fuel gases and single or multiple burner systems. Advantages include low maintenance designs, various models and sizes for application flexibility and easy operation.

- LG Mixing Tubes & Multi-Ratio Mixers and the Premix Blower are designed for low pressure gas.
- HG Mixing Tubes and the Ventite Inspirator are designed for high pressure gas applications.

## Premixing Equipments



"LG" Mixing Tube



"HG" Mixing Tube

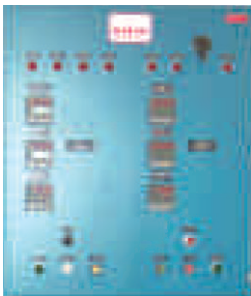


VENTITE™ Inspirator



MULTI-RATIO® Mixer

## Control Panels



Maxon control panels are designed for safe and efficient control of your combustion system. Standard panels available are:

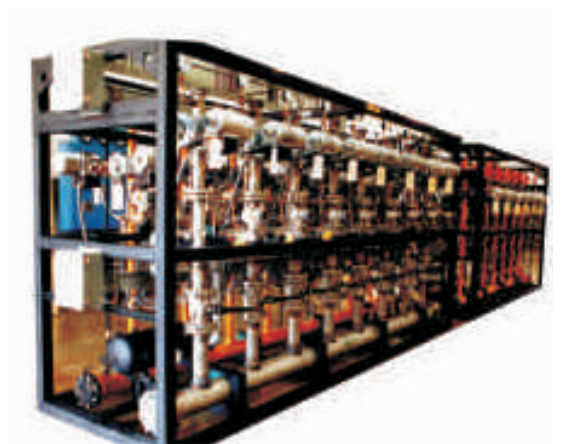
- **Mini-Panels**
- **Intermediate Combustion Control Panels**
- **Combustion Control Panel System**

**Custom panels** are also available to accommodate a variety of voltages or multiple burner applications.

## Pipe Trains

To help reduce installation, Maxon offers pre-piped gas trains, in sizes from 0.75" to 8". Each train is engineered for efficiency and safety and while there is a choice of standardized arrangements, the inlets, outlets, regulators and other accessories can be specified to meet custom requirements.

Trains are available in General Purpose or Block & Bleed configurations with each pressure-tested before shipment.



Maxon valves are industry's leading choice because of their unsurpassed performance, broad range of models for application flexibility and attention-to-quality manufacturing.

## Valves

### Shut Off Valves

Maxon electro-mechanical & pneumatic valves are designed to close instantaneously in case of an emergency or when a burner system is stopped. Maxon valves are engineered for long service and each one is 100% tested before shipment.

Design features include:

- Micro-Lapped Seating Surface With Self-Cleaning Action
- Normally-Closed and Normally-Open Models
- Automatic and Manual Reset
- Minimal Pressure Drop with Straight-through Flow
- Cast Iron and Steel Bodies with a Variety of Trims
- NI and 8000 series Valves Approved for Hazardous Duty



Series 808



Series 5000 CP



Series 8000



Series STO-A

## Pipe Trains

### Control Valves

SYNCHRO Valves may be used for individual adjustable gradient fuel flow control, or in tandem with air valves to gain precise control of air/fuel ratios. Multiple fuel valves may be connected for stand-by fuel or multiple burner arrangement. MICRO-RATIO valves consist of SYNCHRO valves linked in tandem.

- **Series "A" Flow Control Valves** incorporate bodies and connections to ANSI specifications, which allow for higher pressures and flows. The positive push/pull actuator supplies higher accuracy and reliability.
- **Series "Q" Valves** provide the high capacity and low pressure drop benefits of a butterfly valve design and an adjustable gradient feature for accurate fuel flow control.
- **Series "BV" Valves** are used to balance gas or air flows in multiple burner systems fed by a common manifold. They feature a full-flow butterfly design that can be locked in any position.
- **Series "CV" Valves** incorporate a full-flow, fixed gradient butterfly valve design for high capacities at low pressure drops using minimum torque.



"BV" Valve



Electrically Operated "CV" Valve



MICRO-RATIO® Valve

# Hi-end Systems from Maxon

## SMARTFIRE®



- Precise electronic control of air and fuel flow to the burner
- Maintain emissions or fuel efficiency over the entire operating range of the burner
- Automatically compensates for changes in combustion or process conditions.
- Plug 'n Play, turnkey system
- Integrates easily with all burner management systems
- FM and CSA approved
- Meets requirements for European Electromagnetic
- Compatibility (EMC) and Low Voltage Directives

## SMARTLINK® MRV



- Precise and repeatable flow control
- Electronic parallel positioning system for air/fuel ratio control
- High degree of precision, repeatability and durability.
- Synchronous control of up to four valves with conventional signal from the user's process controller.
- Direct coupled valve and actuator assembly
- Adjustable to 0.1 degrees accuracy.
- UL & CE approved electronics & software for air-fuel ratio control
- Maintenance free operation: Electronic passcode protection: Simple set-up: Standby, purge and light off positions

## Ultra Low NOx Burners

### OPTIMA™ SLS



- Extremely Clean, reliable heat with ultra low NOx and CO production for ease of air permitting and environmental compliance
- Large capacity heat releases with a compact, robust flame geometry
- Intelligent ratio control for reliable operation and optimal fuel efficiency
- Fuel flexible with natural gas, propane, and butane capability. Contact MAXON for other fuels
- Configurable for dryers, air heaters, ovens, kilns, process heaters, paper machines, and a variety of other industrial heating equipment

### M-Pakt®




- Produces extremely low emission of NOx and CO
- Burns natural gas or propane
- Flame contained almost entirely inside the discharge sleeve
- Compact packaged design with a variety of control methods
- Durable steel outer construction with stainless steel internals
- Optional discharge sleeve selections for use with low or high temperature applications

## Honeywell Environmental & Energy Solutions (E&ES)

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# Honeywell

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