2016 | **OXY-THERM LE BURNER OVERVIEW**

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ECLIPSE krom//schröder MAXON

Honeywell Industrial & Commercial Thermal Overview

The Industrial & Commercial Thermal (ICT) Family of Products Include:

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Honeywell ECLIPSE

Honeywell krom schroder

Honeywell MAXON

Honeywell brand commercial combustion products provide solutions for HVAC and burner and boiler control systems to help streamline integration, installation, and end-user interaction while improving efficiency and performance. Our key products include programmers and primaries, valves and actuators, limits and pressure controls, communications and software. Applications include burners, boilers, furnaces, packaged rooftop units, kilns, water heaters and more.

Honeywell Eclipse offers a comprehensive range of gas, oxygen, and oil burners, recuperators, heat exchangers, and fully engineered combustion systems. Eclipse products deliver safe, reliable, efficient, and clean heat for high and low temperature applications in all types of industrial heating processes. Eclipse application engineers can design custom solutions that are configured to meet specific customer requirements. Our team of factory authorized technicians provides an extensive range of customer support services.

Honeywell Kromschröder manufactures gas combustion and controls serving both Heating and Process applications. Kromschröder's wide product portfolio encompasses the entire combustion safety and control system. From filters and regulators, to safety shut-off and control valves, to the burner management system; Kromschroder offers controls and solutions to provide safe and reliable combustion with progressive and energy efficient technology.

Honeywell Maxon provides integrated burner solutions and engineered combustion systems for industrial process heating applications. Maxon's complete line of combustion solutions equipment includes gas and oil burners, gas and oil valves, hazardous area shut off valves, low NOx and Ultra low NOx burners, and flow control technologies. Maxon products are utilized by almost every manufacturing industry including oil and gas, pulp and paper, automotive, textile, building materials, metals, glass and ceramics, foods and agriculture.

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OXY-THERM® LE Overview

- Dual-Fuel Oxygen Burner
- Extremely low NOx levels
    - Up to 70% lower than conventional oxy-gas burners
    - Up to 50% lower than conventional oxy-oil burners
- Patented oxygen staging design
- Burns any gaseous fuel, even those that may be unstable using air for combustion
- Fuel oil capability ranges from light to heavy oils
- Quickly convert between gas and oil by changing the burner nozzle
- Patented design eliminates flame lofting, providing cooler furnace crowns
- Dramatic savings in high temperature applications by reducing total flue gas volume in furnace
- High flame temperature increases radiant heat transfer in most applications

OXY-THERM® LE Applications

- Glass Furnaces
- Converted regenerative type furnaces
- Melters
- Unit Melters
- Non-Ferrous melting
- Waste Incinerators
- Smelters
- Other high temperature applications
- Kilns
- Re-heat furnaces

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OXY-THERM® LE Specifications (Gas)

- Available in three sizes from 0.2 to 15MM Btu/h
- Extended Block available for two sizes
- High Operational Turndown

Typical burner data				
Fuel: natural gas at 60°F with 1000 Btu/ft^3 (st) HHV - sg = 0.6 [1]				
propane at 60°F with 2500 Btu/ft^3 HHV - sg 1.57 [1]				
Stated pressures are indicative. Actual pressures are a function of air humidity, altitude, type of fuel and gas quality.				
Gas OXY-THERM® LE Burners		**OXY-THERM® LE Burners**		
		Series 600	Series 900	Series 1200
Maximum capacity range	MBtu/h	0.2 to 2.7	1.5 to 11	5 to 15 [2]
Turndown		5:1		
Pressures required to burner inlet for maximum capacities [3]	Oxygen	Refer to "Specifications of OXY-THERM® LE burners" for pressure curves		
	Natural gas psig	0.5-8 [3]		
	Propane psig	1-20 [3]		

[1] sg (specific gravity) = relative density to air (density air = 0.0763 lb/ft^3 (st))

[2] Capacities greater than 15 MBtu are possible. Contact MAXON for specific details.

[3] Gas OXY-THERM® Burners are custom sized to meet your application and utility requirements. Please contact MAXON for specific details.

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OXY-THERM® LE Specifications (Oil)

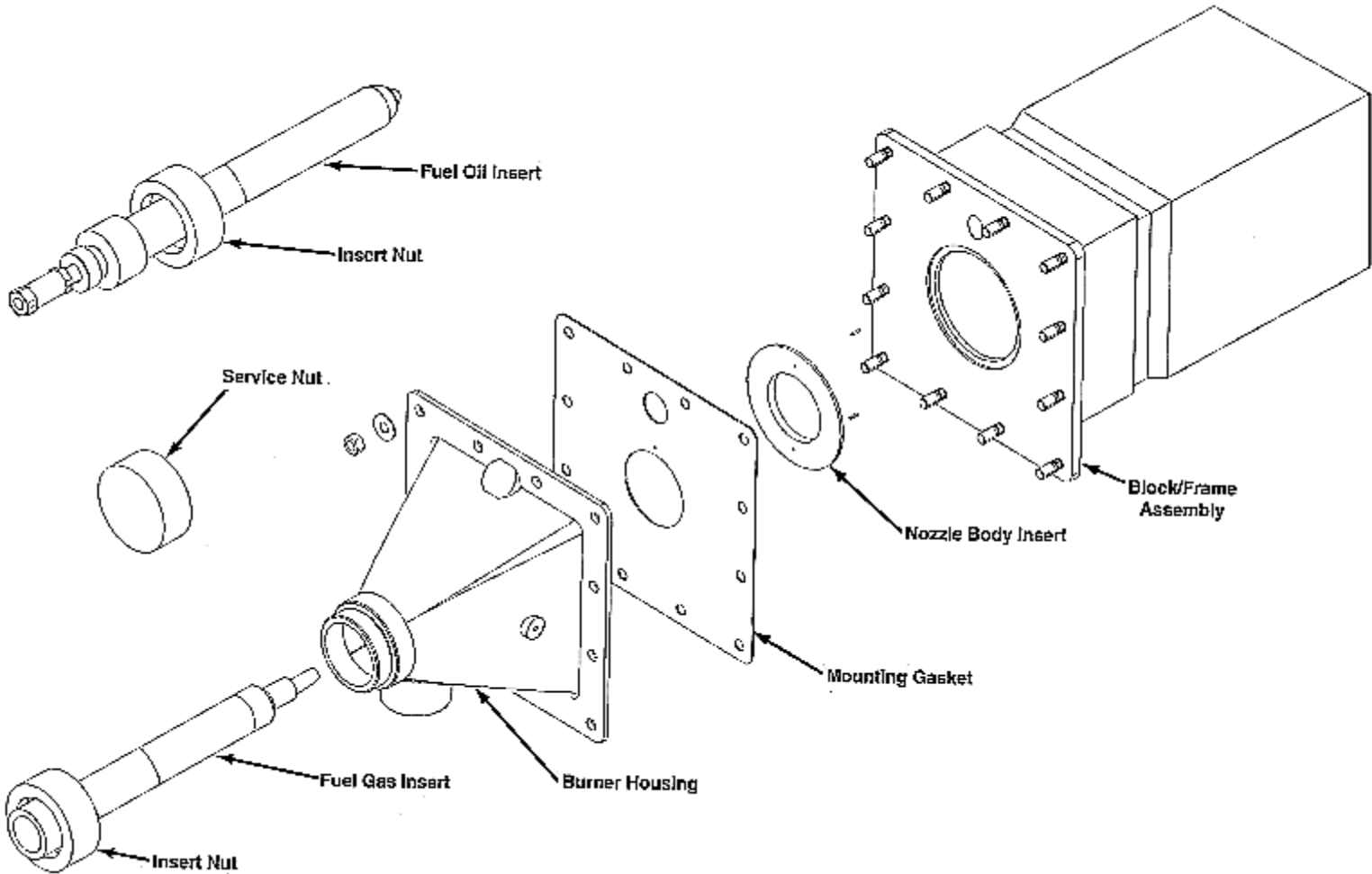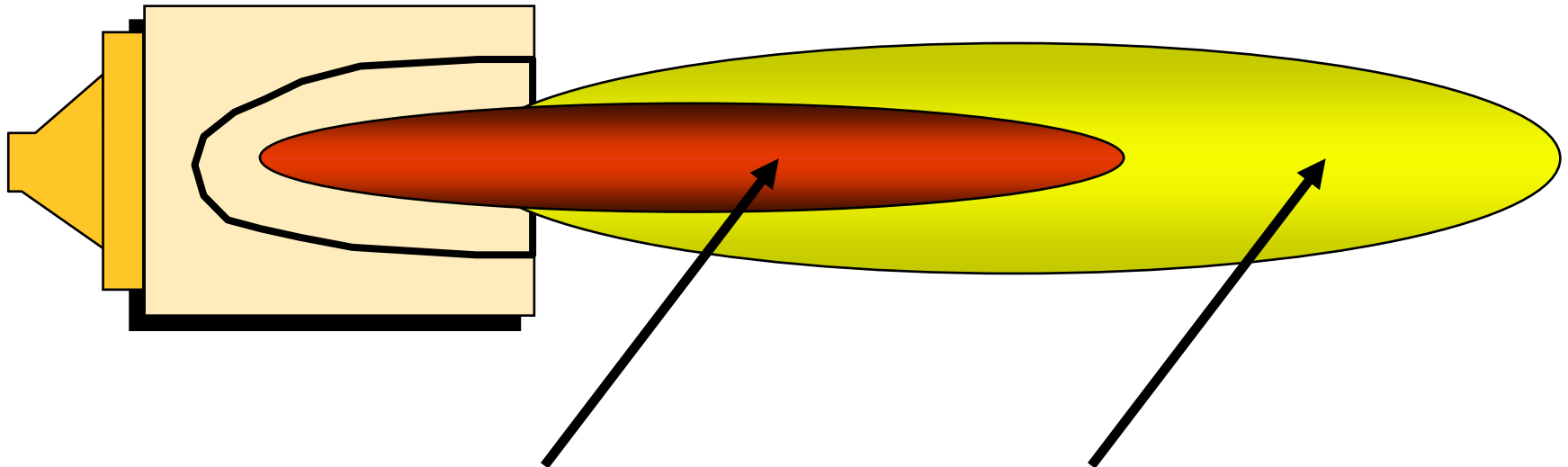| Typical burner data Fuel: light oil (#2): 19.4 Btu/lb Stated pressures are indicative. Actual pressures are a function of air humidity, altitude, type of fuel and gas quality.									
Oil OXY-THERM® LE Burners	Series	Series 600 or 900	Series 900					Series 1200	
	Size	70	100	150	200	300	300	400	
Maximum output	MBtu/h	3.1	4.4	7.5	10	14.9	14.9	19.9	
Maximum fuel flow	gallons/h	21	30	52	69	103	103	137	
Minimum fuel flow	gallons/h	4.2	6	10	15	26	26	34	

OXY-THERM® LE Exploded View

Fuel Oil Insert

Insert Nut

Service Nut

Nozzle Body Insert

Block/Frame Assembly

Mounting Gasket

Fuel Gas Insert

Burner Housing

Insert Nut

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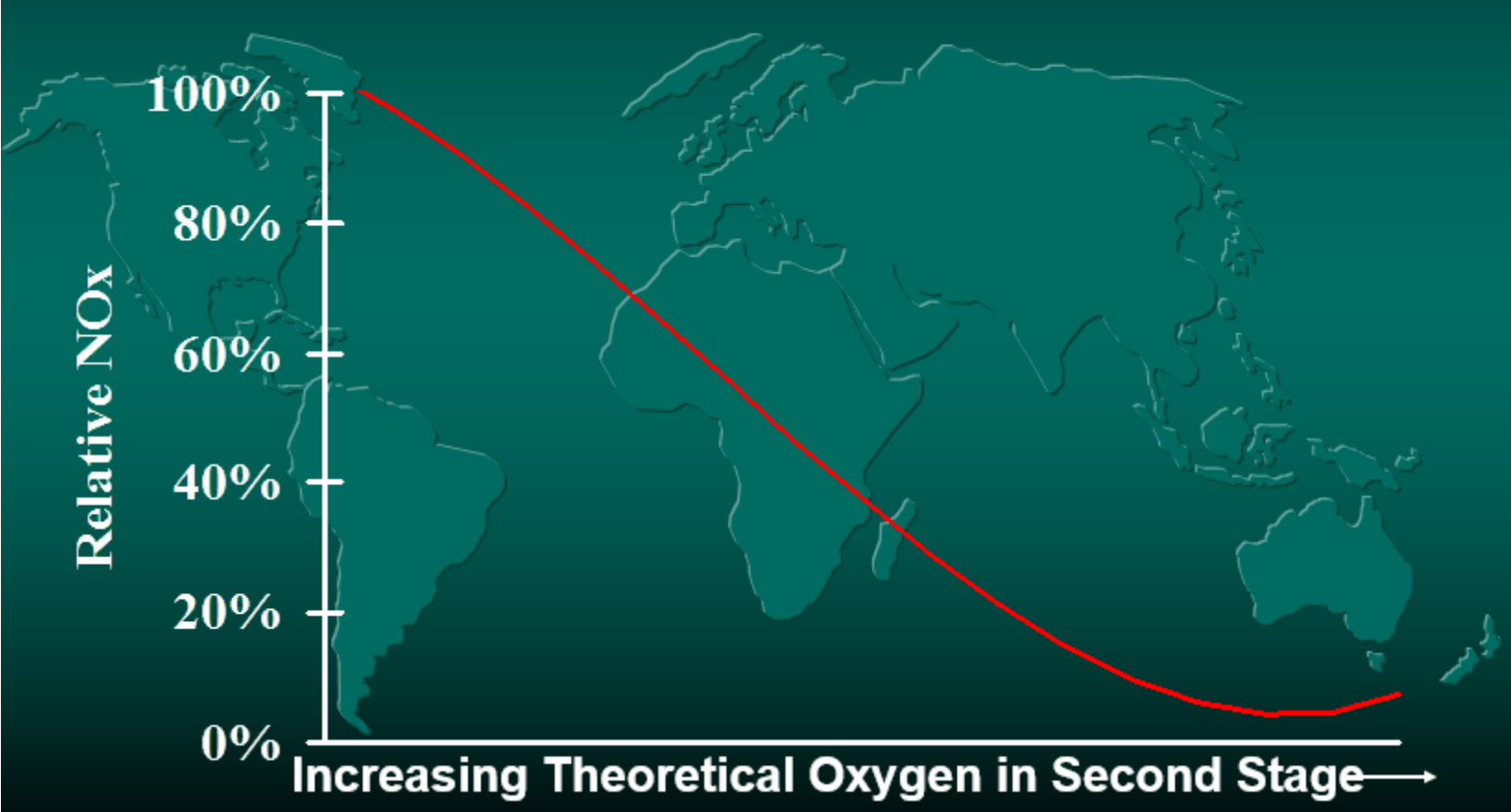# OXY-THERM® LE Oxygen Staging

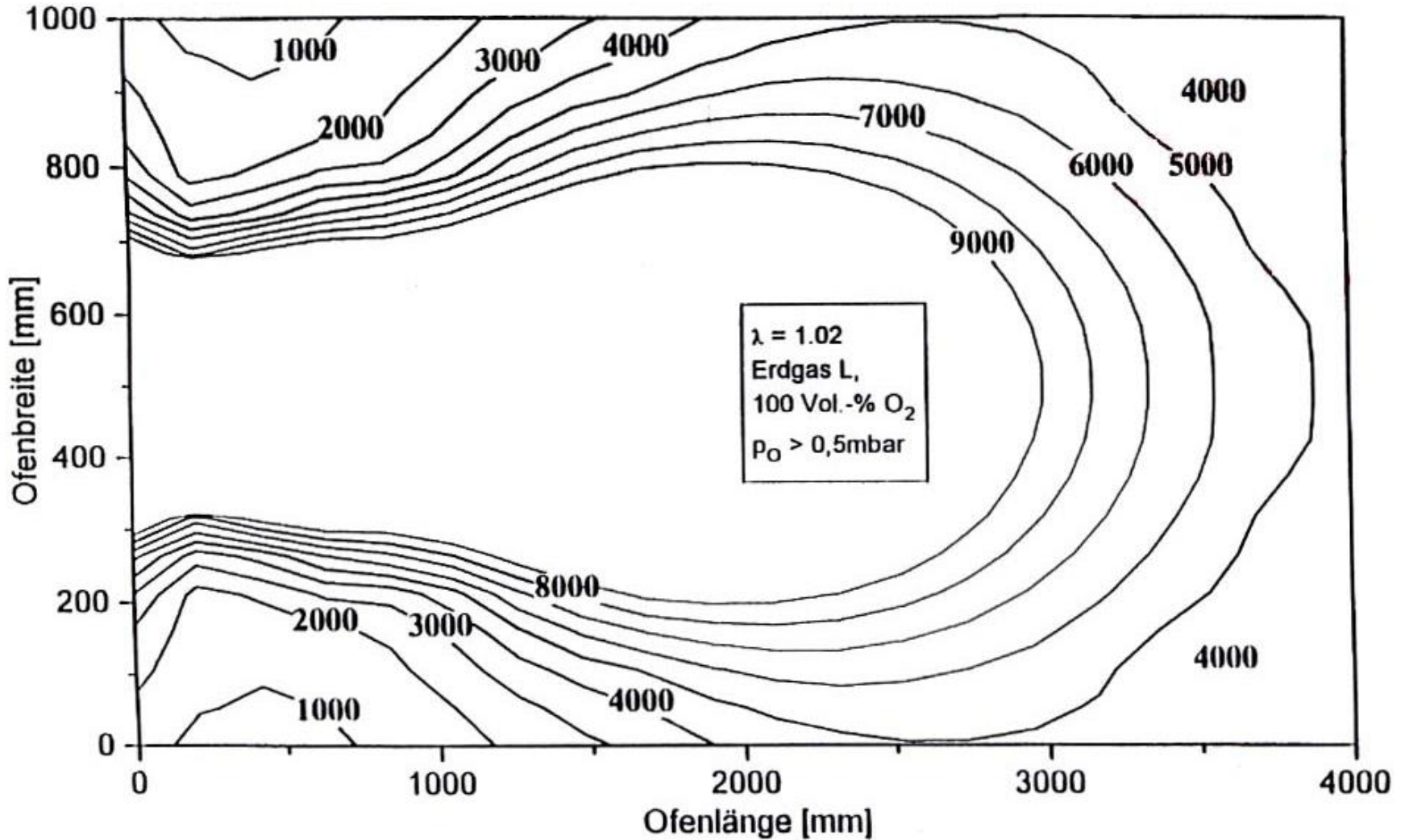**OXY-THERM LE**

First Stage:
Fuel Rich

Second Stage:
Lower Flame Temperature

OXY-THERM® LE Oxygen Staging and NOx

OXY-THERM® LE Flame Shape

Flame Coverage Determined By CO Profile Inside Flame