

OXY-THERM® LE FF

Flat Flame Burners



- **Fan-shaped flat flame** maximizes radiant heat transfer in furnaces by optimizing flame surface area.
- **Patented deep oxygen staging** optimizes flame luminosity by intermediate free carbon.
- **Achieve industry leading emissions** with MAXON's patented staged oxygen combustion.
- **Higher efficiency operation** as a result of improved heat transfer, greater flame coverage and unmatched radiant uniformity.
- **Operator-friendly design** allows changing burner nozzles or swapping fuels without idling the furnace - no tools required.
- **Rugged, low maintenance design** follows proven OXY-THERM® LE technology

Product description

The OXY-THERM® LE FF design consists of a single block and housing assembly which accepts different fuel nozzles. The fuel nozzles are interchangeable without the use of tools and can be drilled to a customer's specific capacity to ensure maximum furnace efficiency.

Using MAXON's patented staged combustion technology, oxygen is introduced to the flame in a low NOx or low emissions configuration. This technology allows the heat release and related flame turbulence within the block to be extremely low, providing a cool block discharge with low momentum which eliminates recirculation commonly attributed to batch-related buildup.

While providing outstanding durability, oxygen staging has an additional two-fold effect of minimizing the formation of NOx and improving heat transfer.

Available OXY-THERM® LE FF sizes

Typical burner data		
Fuel: natural gas at 15°C with 10.9 kWh/Nm ³ HHV - sg = 0.6 [1]		
Combustion air: 15°C - 21% O ₂ - 50% humidity - sg = 1.0 [1]		
Stated pressures are indicative. Actual pressures are a function of air humidity, altitude, type of fuel and gas quality		
Standard capacity range	kW	73 to 4400 [2]
Turndown		4:1
Required pressures to burner inlet for maximum capacities [3]	Oxygen	See oxygen pressure chart
	Natural gas mbar	35-550 [3]
	Propane mbar	70-1380 [3]
Typical oxygen to fuel volumetric ratios [4]	To natural gas	2.05 to 1
	To propane	5.1 to 1

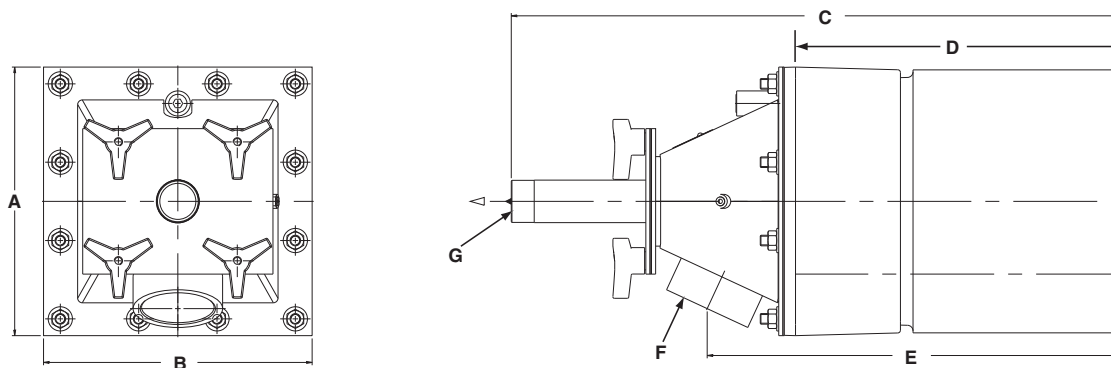
[1] sg (specific gravity) = relative density to air (density air = (st) 1.293 kg/Nm³)

[2] Higher capacities available; contact MAXON for details.

[3] OXY-THERM® LE FF burners are custom drilled to meet your application and utility requirements. Please contact MAXON for specific details.

[4] Exact calorific values should be checked and oxygen/fuel ratio adjusted accordingly.

Dimensions and weights



Dimensions in mm unless stated otherwise						
A	B	C	D	E	F Ø	G Ø
305	305	686	381	470	3" NPT	1-1/2" NPT

Part	Envelope dimensions in mm	Weight kg
Burner assembly	686 x 305 x 305	113
Block and frame	381 x 304 x 304	95

Typical emissions

Typical NOx ranges from 10-20 mg/MJ* in a sealed oxy-fuel fired furnace.

*Emission numbers are highly dependent on application. There can be a large variance in actual emissions due to the application-specific furnace conditions (i.e. nitrates in batch, air leakage into furnace, furnace temperature, etc.).

Read "Specifications of OXY-THERM® LE FF Burners" for correct and complete information on OXY-THERM® LE FF Burners.