

Eclipse PrimeFire 400 Series

Burners

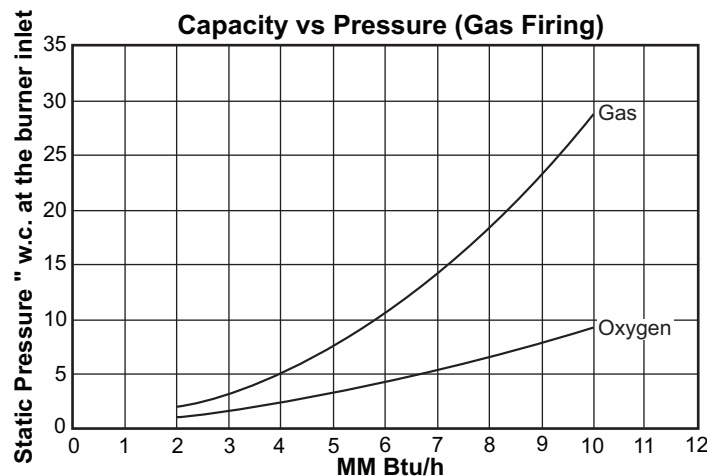
Oxygen-Fuel Fired Combustion Systems

Model 10

The Eclipse Primefire 400 Series oxygen-fuel burner is an advanced, non-water cooled burner featuring a flat flame geometry which provides enhanced flame coverage over the load. This flat flame shape also provides uniform heat distribution resulting in improved product quality and extended furnace refractory life.

The Primefire Series 400 oxygen-fuel burner incorporates a pre-combustor at the back of the burner which mixes a portion of the combustion oxygen with the fuel stream. This causes gas cracking which produces soot or free carbon particles. These free carbon particles increase luminosity and improve the radiant heat transfer to the glass load. Overall furnace efficiency is improved, peak flame temperatures are reduced and NOx formation is lowered.

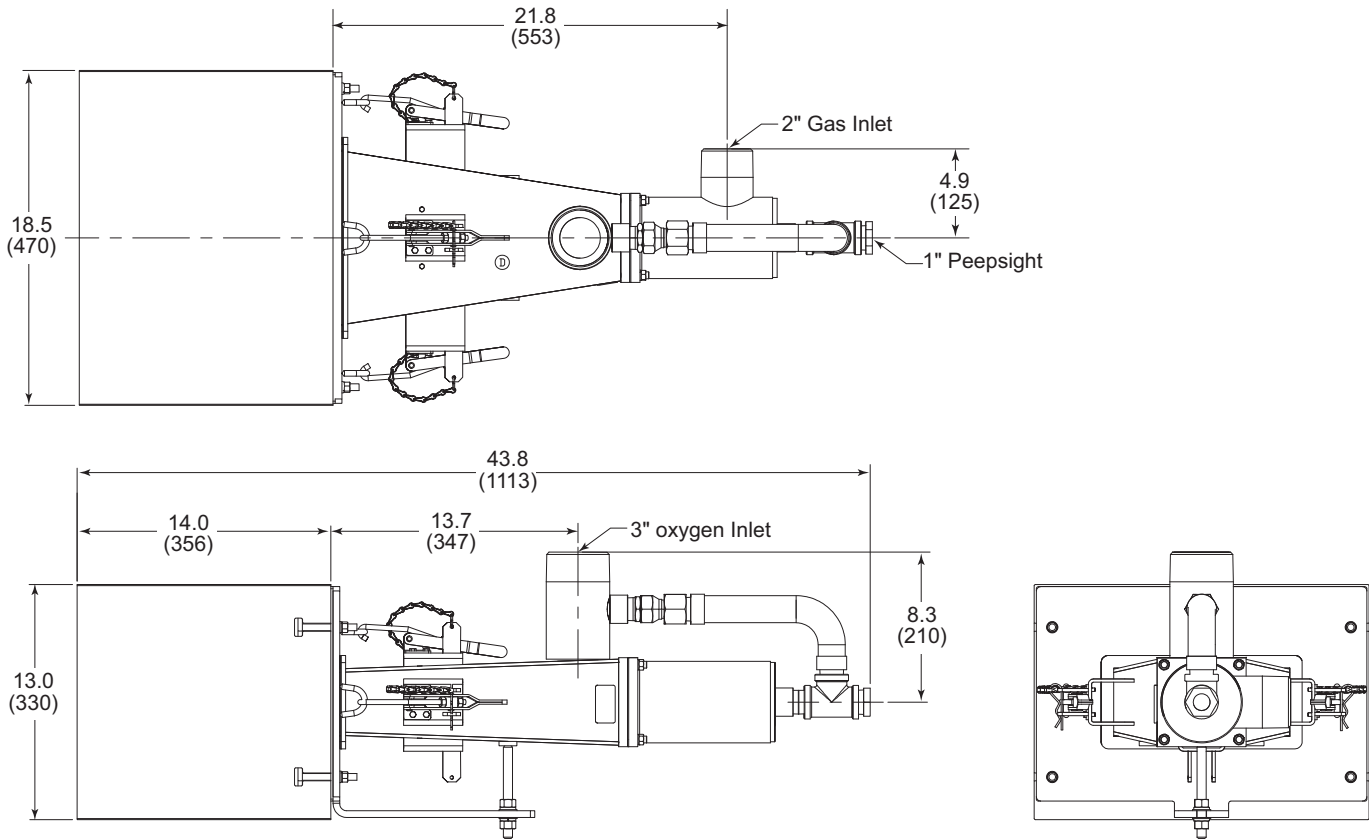
Primefire Series 400 oxygen-fuel burners are available in four sizes with maximum capacities of 2MM, 4MM, 10MM and 20MM Btu/hr. All models are capable of 4:1 turndown and can be fired using natural gas or fuel oil.



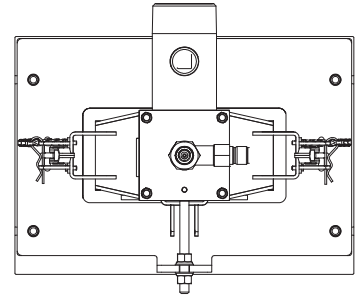
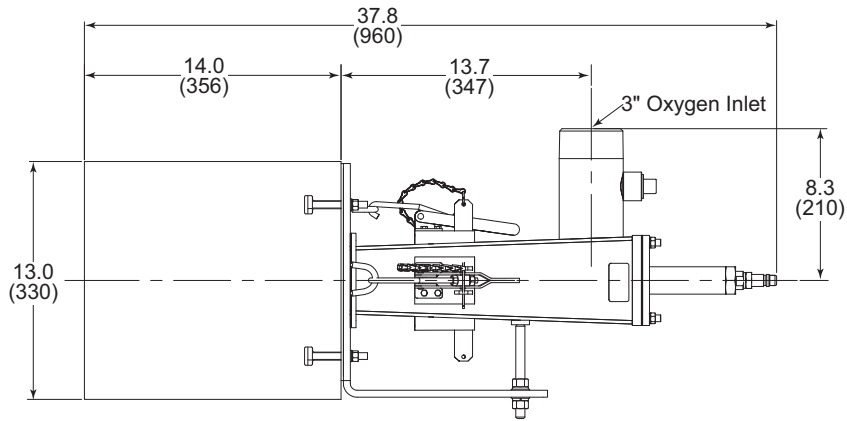
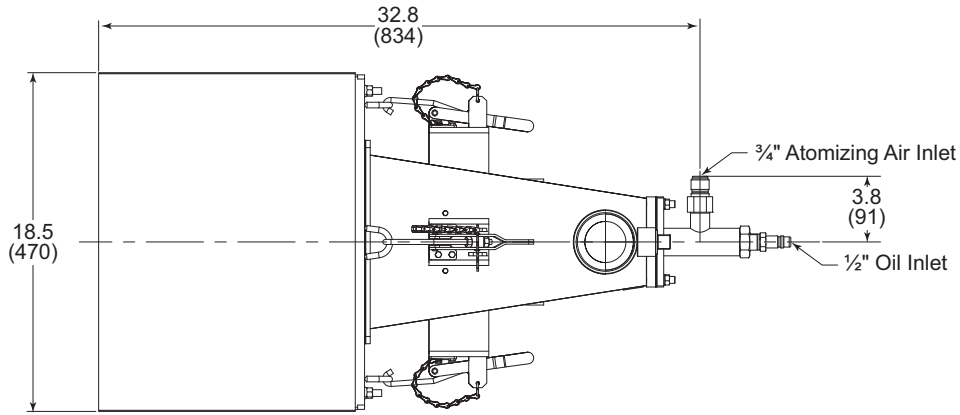
Capacity		Velocity		Flame Length		Flame Width	
Btu/h	kW	FPS	MPS	Feet	Meters	Feet	Meters
10,000,000	2930	117	35.7	10.8	3.3	6.00	1.82
9,000,000	2637	106	32.3	10.4	3.2	5.83	1.77
8,000,000	2344	94	28.6	10.0	3.0	5.67	1.73
7,000,000	2051	82	25.0	9.6	2.9	5.50	1.67
6,000,000	1758	70	21.3	9.2	2.8	5.33	1.62
5,000,000	1465	59	17.9	8.8	2.7	5.17	1.57
4,000,000	1172	47	14.3	8.4	2.6	5.00	1.52

Burner weight less block: 74 lbs (33.6 kg)

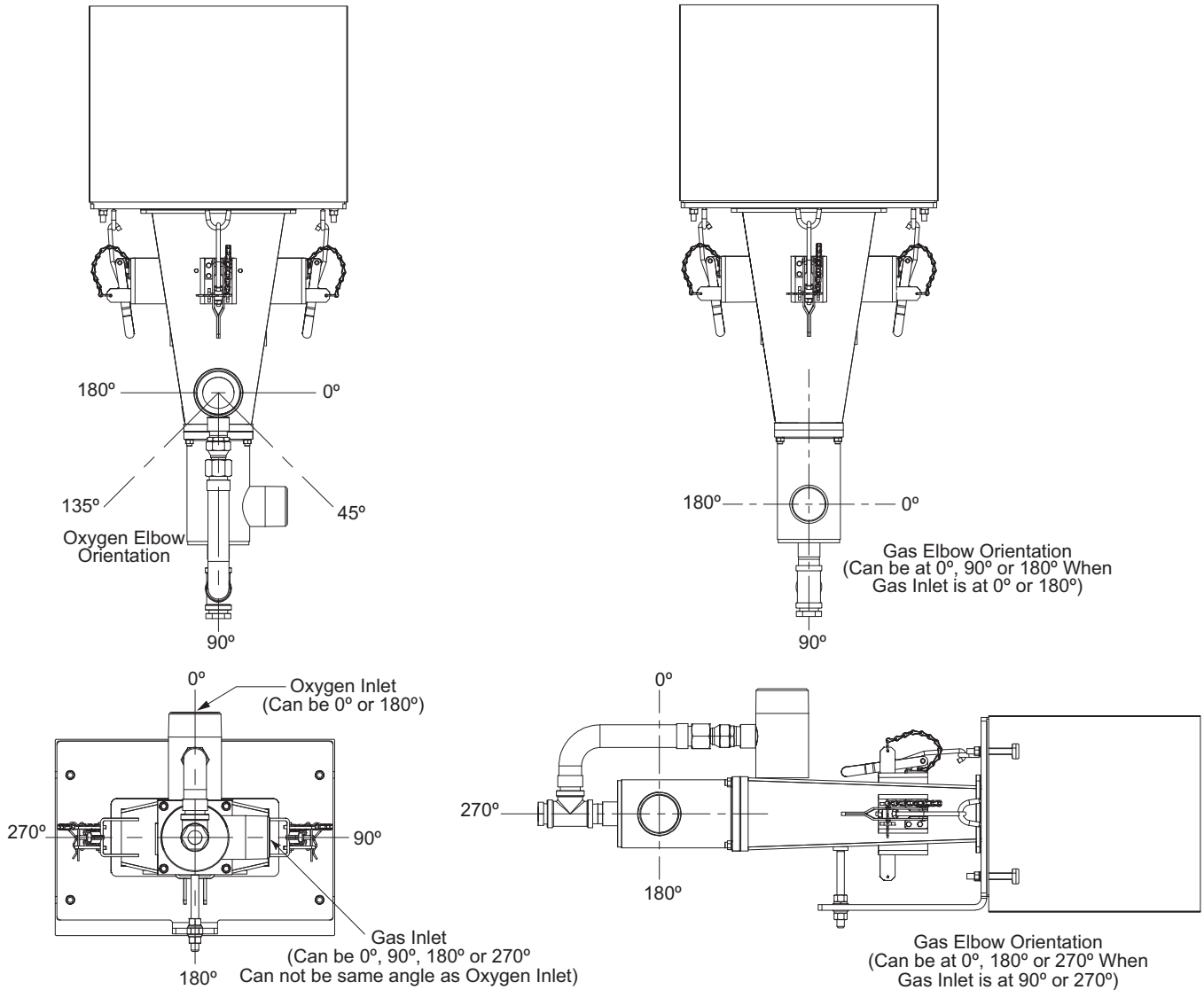
Dimensions
Dimensions in mm (inches)
PrimeFire 400 10MM Gas







PrimeFire 400 10MM Oil



Inlet Options PrimeFire 400 10MM



Oxygen Quick Disconnect Options			
3 Inch	2½ Inch	3 Inch	2½ Inch
Gas Quick Disconnect Options			
2½ Inch	2 Inch	2½ Inch	2 Inch
			

Specifications

Lighting the Pre-Combustor in a furnace above the auto-ignition point: Open oxygen first, open gas fully, burner is now lit. Slowly reduce gas until the pre-combustor makes a “pop” sound. Fully open the gas valve again. Check peepsight for blue swirl in pre-combustor.

Maintenance: Every four days or as necessary, shut off gas for 15 to 20 seconds while leaving the oxygen on, then relight the pre-combustor. The oxygen will clean off the carbon deposits on the gas nozzle.

Material Specification: 304 stainless steel for oxygen nozzle and 600 inconel for gas nozzle.