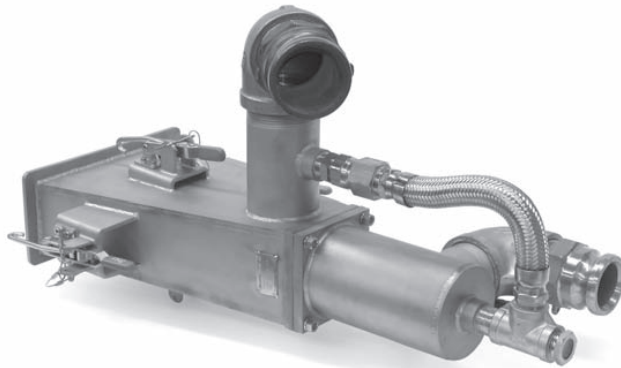


# Eclipse PrimeFire 400 Series

## Burners

### Oxygen-Fuel Fired Combustion Systems

#### Model 20

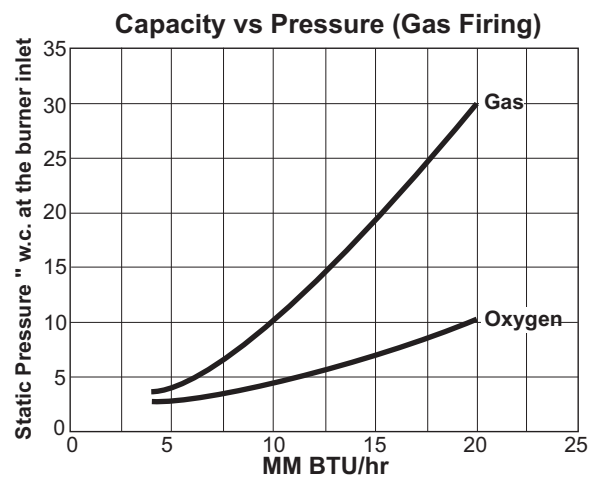


The Primefire 400 series oxygen-fuel burner is an advanced, non-water cooled burner featuring a flat flame geometry which provides enhanced flame coverage over the load. This flat flame shape also provides uniform heat distribution resulting in improved product quality and extended furnace refractory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

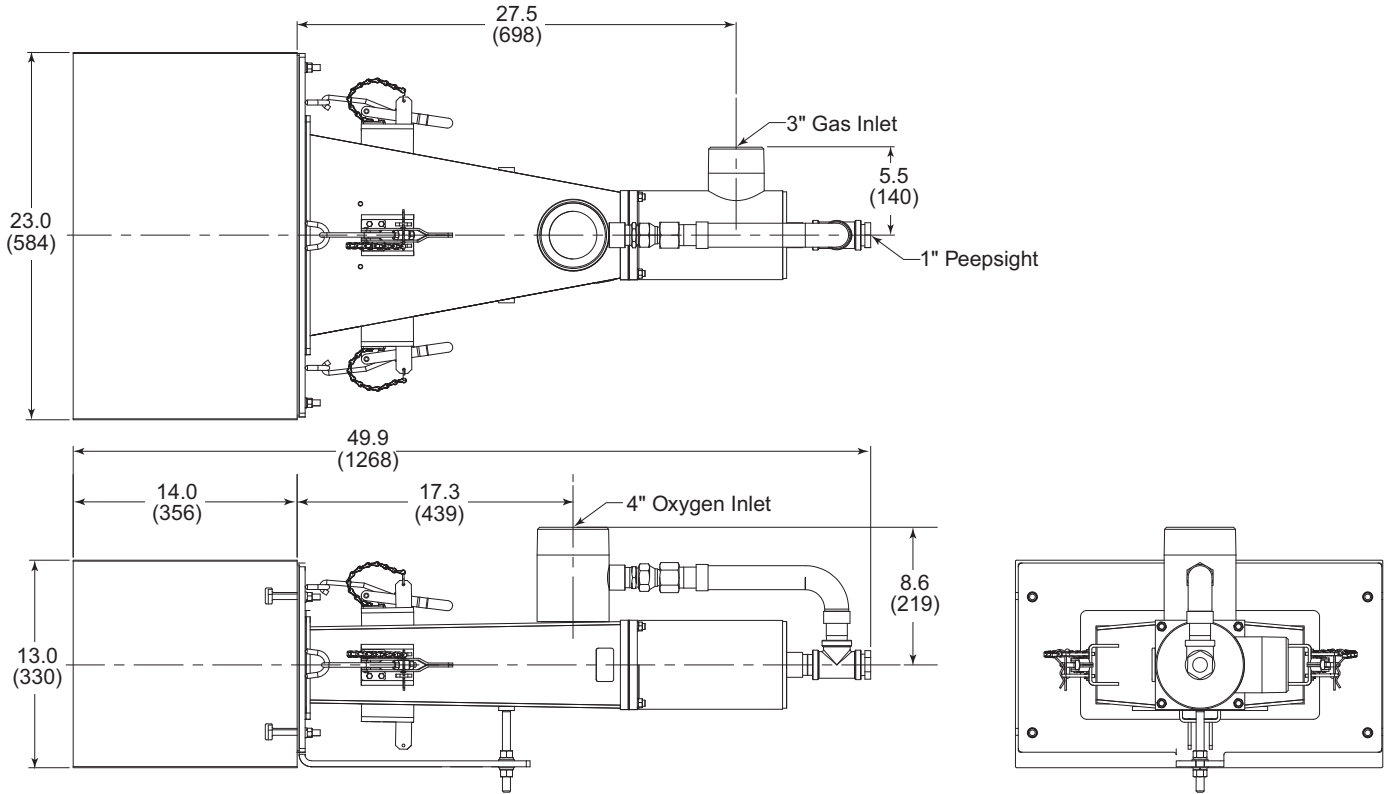


Capacity		Velocity		Flame Length		Flame Width	
Btu/h	kW	FPS	MPS	Feet	Meters	Feet	Meters
20,000,000	5860	160	48.77	14.4	4.4	8.00	2.44
18,000,000	5274	144	43.89	13.9	4.2	7.79	2.37
16,000,000	4688	128	39.01	13.4	4.1	7.57	2.30
14,000,000	4102	112	34.13	12.9	3.9	7.26	2.24
12,000,000	3516	96	29.26	12.3	3.7	7.14	2.18
10,000,000	2930	80	24.38	11.8	3.6	6.93	2.11
8,000,000	2344	64	19.5	11.3	3.4	6.71	2.05
6,000,000	1758	48	14.63	10.8	3.3	6.50	1.98

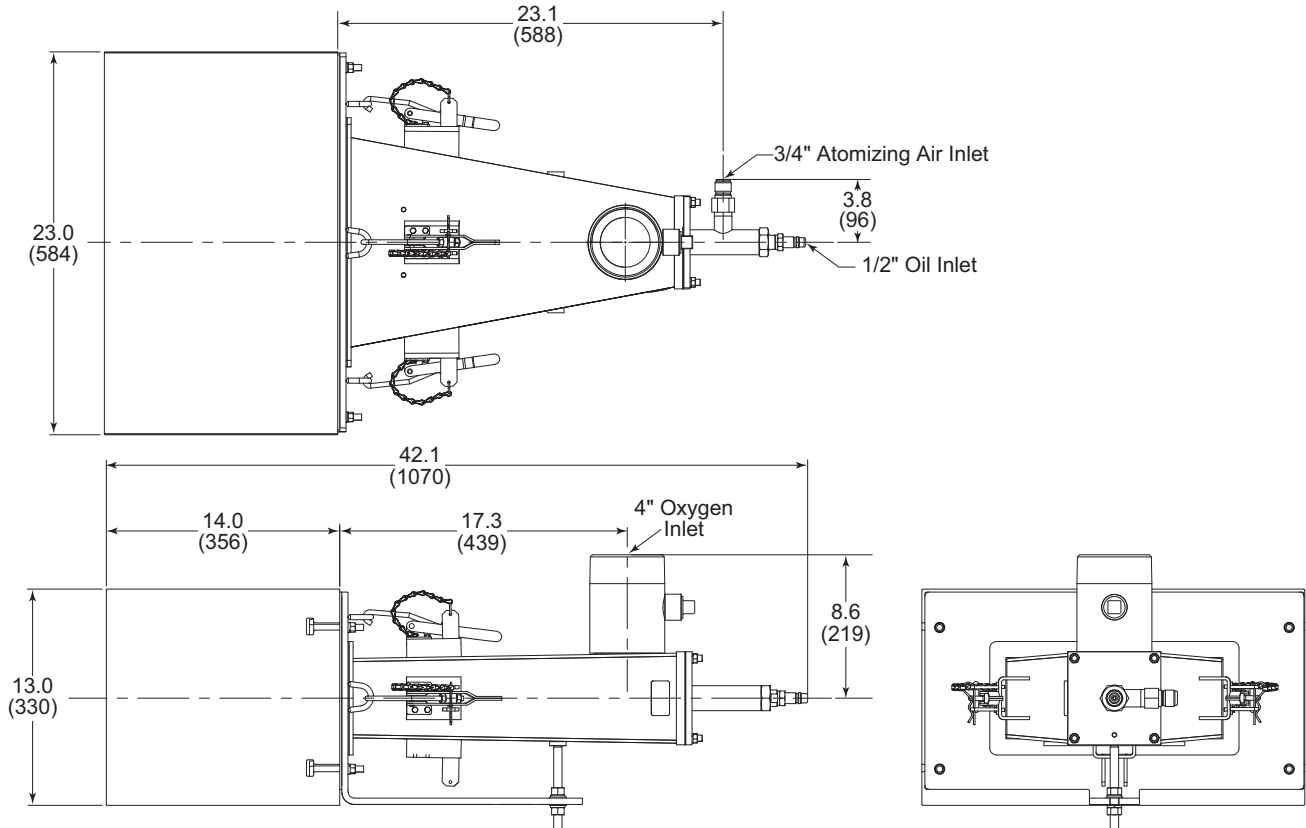
Burner weight less block: 99 lbs (44.9 kg)

# Dimensions

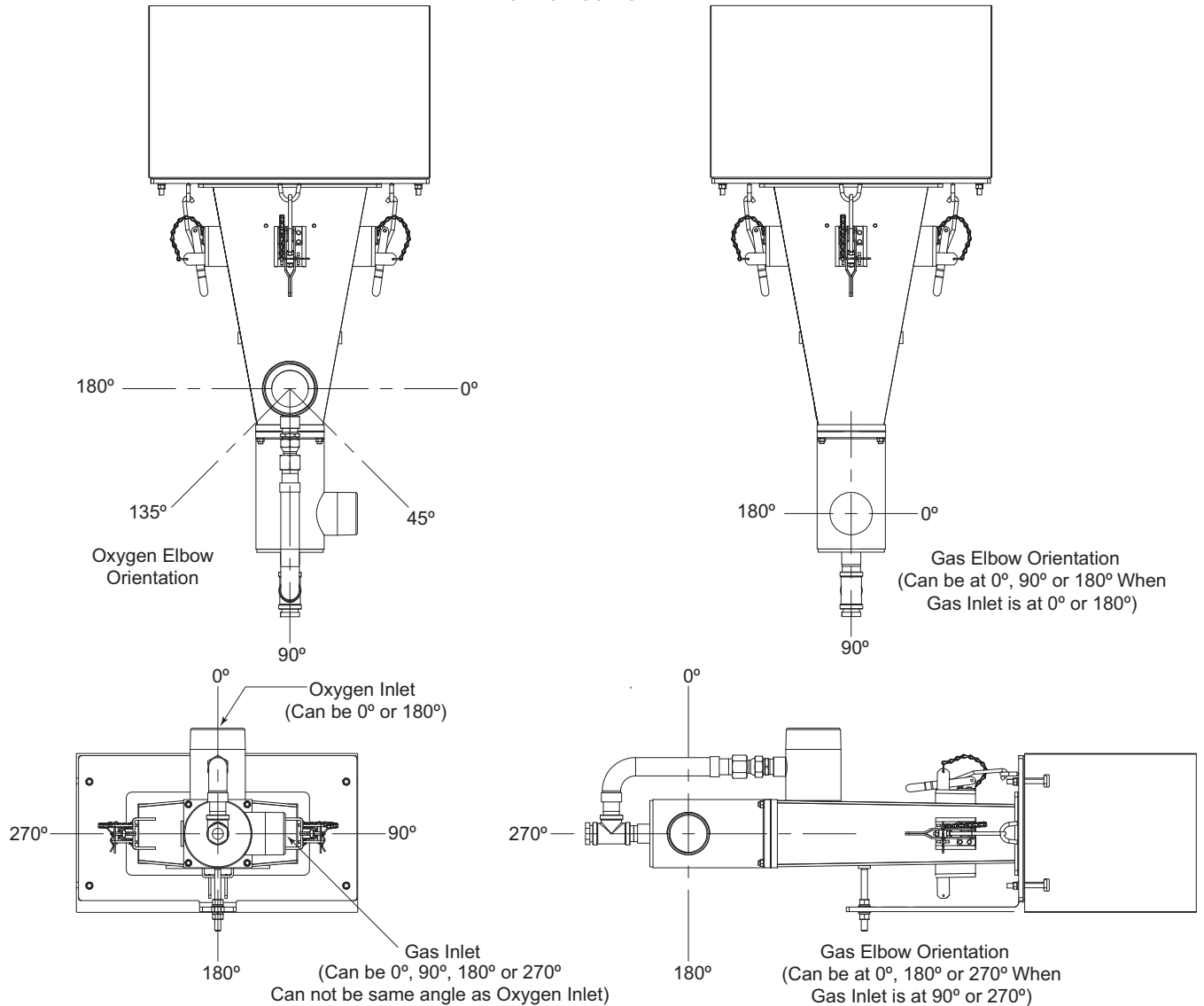
## PrimeFire 400 20MM Gas







## PrimeFire 400 20MM Oil



## Inlet Options PrimeFire 400 20MM



Oxygen Quick Disconnect Options			
4 Inch	3 Inch	4 Inch	3 Inch
Gas Quick Disconnect Options			
3 Inch	2½ Inch	3 Inch	2½ 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 Specifications**

446 stainless steel for oxygen and gas nozzle.

