



# Tube Firing Burners

Model TFB075

Version 2

Parameter		Burner Input 1000's Btu/hr (kW)			
		400 (117)	500 (146)	600 (176)	750 (220)
Low firing rate 1000's Btu/hr (kW) At 100% excess air	Without Flame Safety	5 (1.5)	5 (1.5)	5 (1.5)	5 (1.5)
	With Flame Safety	10 (3)	10 (3)	10 (3)	10 (3)
Differential air pressure "w.c. (mbar) between tapA and B (See Pages 3 & 4)		8.4 (21)	8.3 (20.7)	5.7 (14.2)	6.2 (15.4)
Recommended air orifice plate mm (in)		34 (1.33)	37 (1.45)	42 (1.65)	44 (1.75)
Air flow SCFH (m <sup>3</sup> /hr) At 15% excess air		4600 (130.3)	5750 (162.8)	6900 (195.3)	8625 (244.2)
Differential gas pressure "w.c. (mbar) between tap C and D (See Pages 3 & 4)	nat. gas	4.3 (10.7)	3.2 (7.9)	2.8 (6.9)	4.4 (10.9)
	propane	3.5 (8.7)	2.7 (6.7)	3.9 (9.7)	2.9 (7.2)
	butane	2.8 (6.9)	4.3 (10.7)	3.1 (7.7)	4.8 (11.9)
Recommended gas orifice plate mm (in)	nat. gas	10.8 (0.43)	12.7 (0.50)	14 (0.55)	14 (0.55)
	propane	9.1 (0.36)	10.8 (0.43)	10.8 (0.43)	12.7 (0.50)
	butane	9.1 (0.36)	9.1 (0.36)	10.8 (0.43)	10.8 (0.43)
Piping	N.P.T. or B.S.P. burner piping is available.				
Flame detection	U.V. Scanner*, Flame Rod				
Ignition	direct spark ignition (6 kVAC)				
Fuels	Natural gas, propane, butane <i>For any other mixed gas, contact Eclipse Combustion</i>				

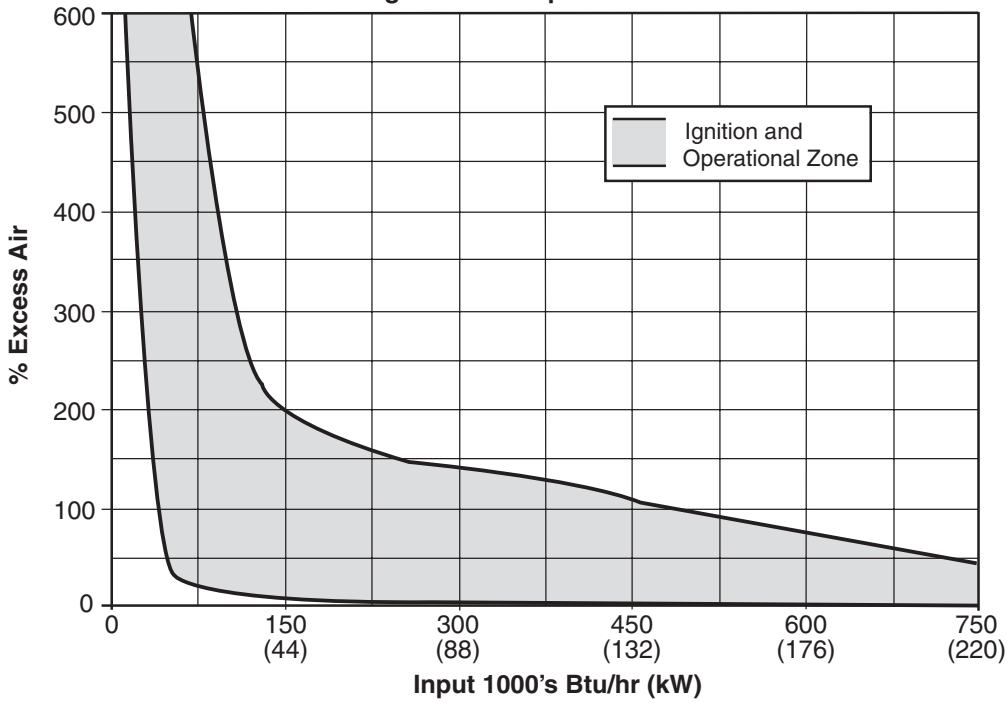
\* When using the U.V. scanner, mounting adapter part number 10033 will prevent the U.V. scanner from detecting the ignition spark.

**Note:** Pressures shown are for system sizing only. The supply pressure at the burner inlets must be at least 3" w.c. higher than the differential pressure shown in the tables.

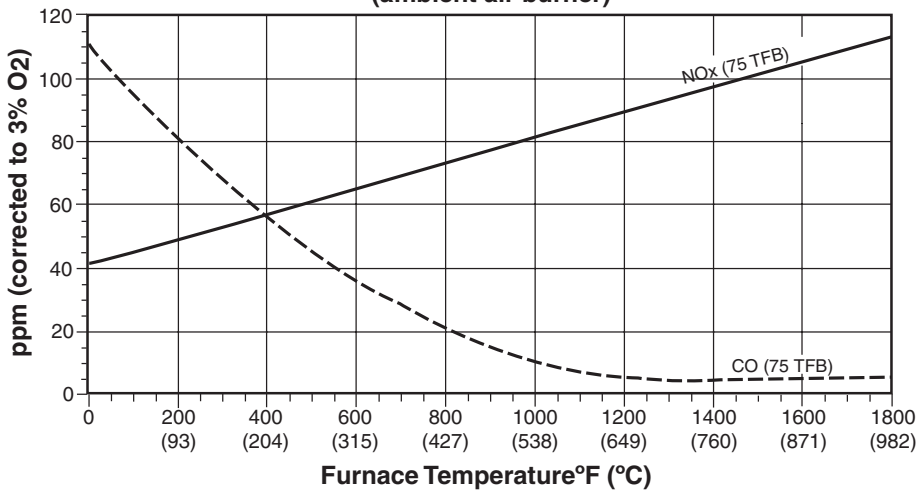
- The low firing rate represents the capability of the burner. Achievement of this rate will be affected by the control method and ratio-regulator used in the system design.
- All inputs based on gross caloric values.
- Eclipse reserves the right to change the construction and/or configuration of our products at any time without being obliged to adjust earlier supplies accordingly.
- Plumbing of air and gas will affect accuracy of orifice readings. All information is based on generally acceptable air and gas piping practices.

# Performance Graphs

## Ignition and Operation Zone



## NO<sub>x</sub> and CO Emissions (ambient air burner)

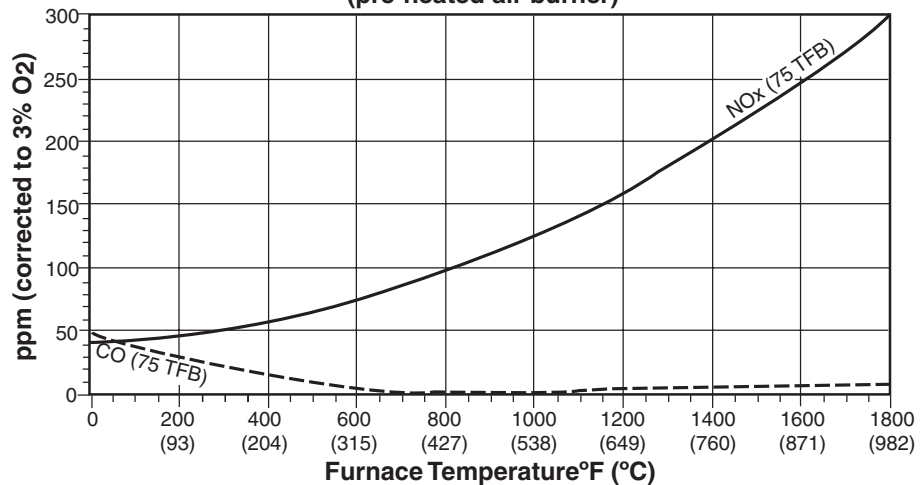


Emissions from the burner are influenced by:

- fuel type
- combustion air temperature
- chamber conditions
- percent of excess air

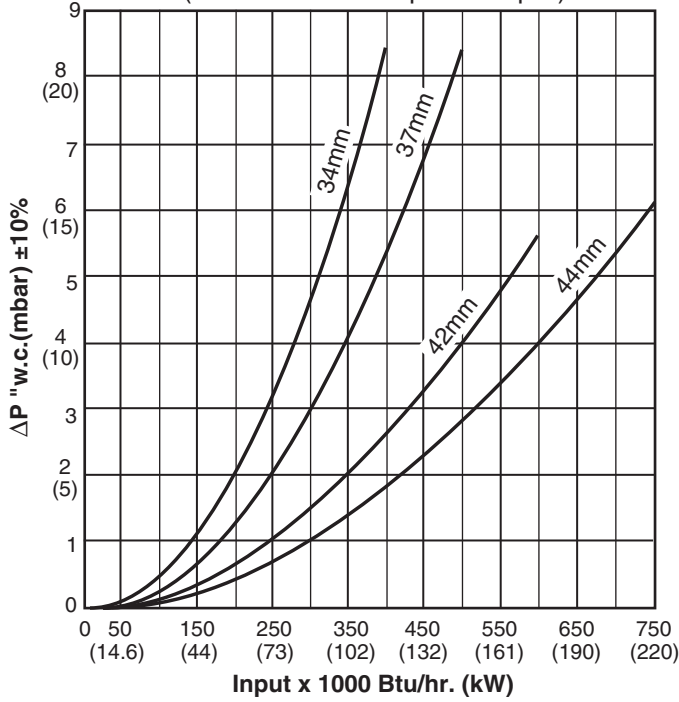
For estimates of other emissions, contact Eclipse Combustion.

## NO<sub>x</sub> and CO Emissions (pre-heated air burner)

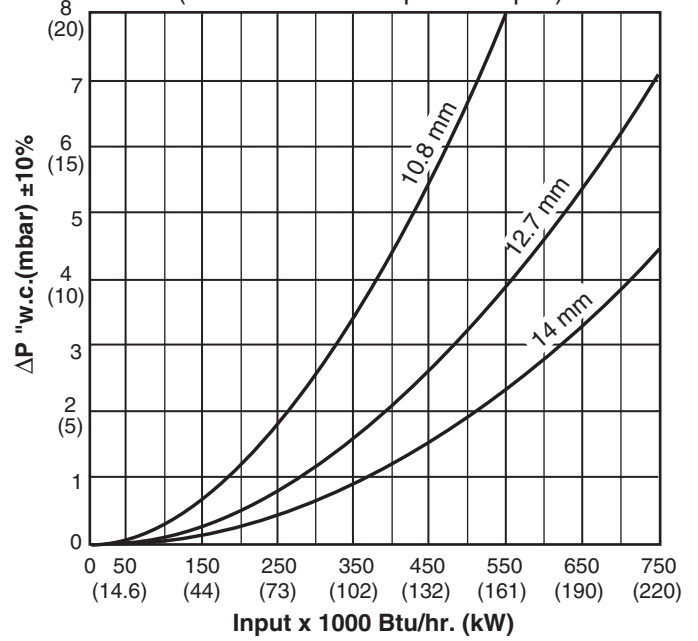


## Performance Graphs (Cont.)

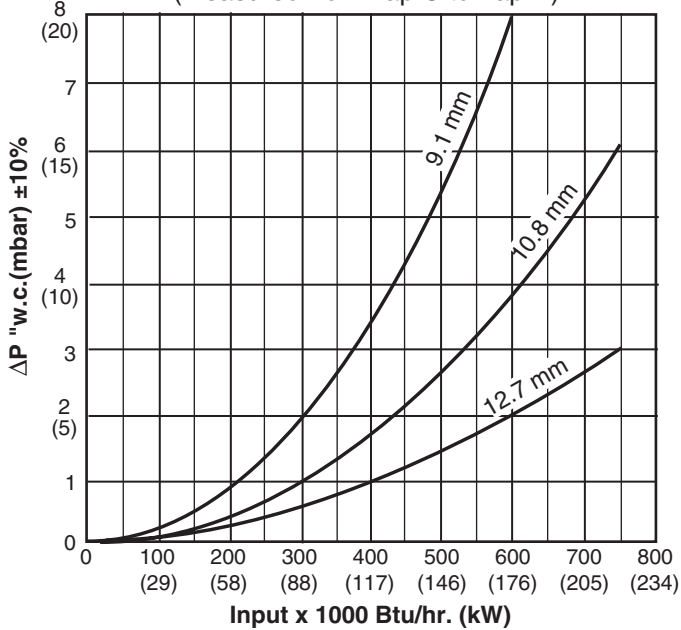
**Air Orifice  $\Delta P$  vs Input @ 3% O<sub>2</sub>**  
(Measured from Tap A to Tap B)



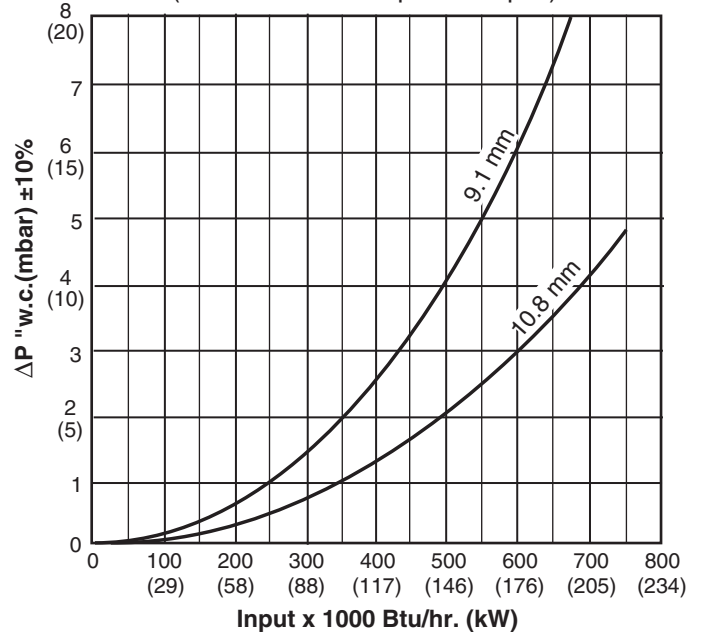
**Natural Gas Orifice  $\Delta P$  vs Input**  
(Measured from Tap C to Tap D)



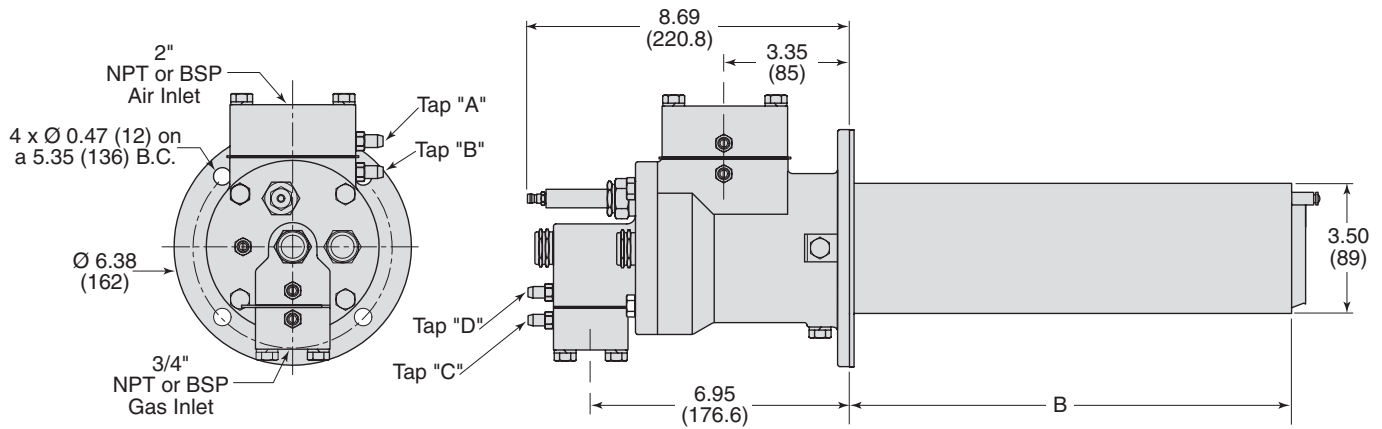
**Propane Orifice  $\Delta P$  vs Input**  
(Measured from Tap C to Tap D)



**Butane Orifice  $\Delta P$  vs Input**  
(Measured from Tap C to Tap D)



**Dimensions & Specifications**  
**Model TFB075**  
**Dimensions in inches (mm)**



*Total Weight 20-25 lb (9-11.3 kg)*

**Dimension "B"**

Each Therm Thief burner is available in a number of variants which have different air tube lengths (dimension "B"). Based on your application, choose the dimension closest to your requirements. Dimension "B" can be from 3" to 24" in one inch increments.



**Eclipse Combustion**



**Offered By:**

Power Equipment Company  
2011 Williamsburg Road  
Richmond, Virginia 23231  
Phone (804) 236-3800  
Fax (804) 236-3882

---

[www.peconet.com](http://www.peconet.com)