

# Winnox Burners

Model WX1000 Version 1

PARAMETER		SPECIFICATIONS			
Blower Type		Packaged blower		Remote blower	
Maximum input, MMBTU/hr (kW)	Chamber pressure "WC (mbar)	Nominal (60 Hz) Nominal I psig (70 mbar)		nlet	
Note:	-5.0 (-12.5)	11.6	(3399)	13.6	(3985)
Capacities given without air filter.	-3.0 (-7.5)	11.0	(3223)	13.2	(3868)
Contact factory for chamber pressures outside the given range, or varying chamber pressure conditions.	0.0	10.0	(2930)	12.5	(3660)
	I.0 (2.5)	9.65	(2827)	12.2	(3575)
	2.0 (5.0)	9.30	(2725)	12.0	(3516)
Minimum input, BTU/hr (kW)	Natural Gas	300,000 (88)			
	Propane, Butane	400,000 (117)			
Fuel inlet pressure at ratio regulator, psi (mbar) <sup>I)</sup>	Maximum	3.0 (207)		5.0 (345)	
	Minimum	1.0 (69)		2.0 (138)	
Maximum chamber temperature, °F (° Note: Tube and plug temperatures should be reduced 150°F when using propane or butane.		Standard combustion tube: 1100 (593) High temp. combustion tube: 1400 (760)			
Flame Length		Flame is inside tube at all inputs			
Excess Air, % at high fire		40-70%			
Piping		N.P.T. burner piping available			
Flame detection		Flame Rod or U.V. Scanner			
Fuels <sup>2</sup> )		Natural gas, Propane and Butane,			
Weight, lbs (kg)		1435	5 (651)	1135	(515)

#### **Main Specifications**

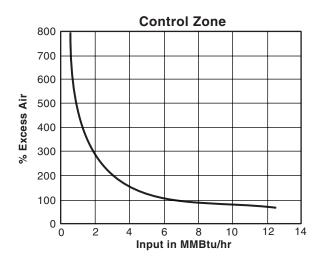
1) For proper performance, this pressure must be kept constant across the burner operating range.

2) See Design Guide for more information about typical fuel composition and properties.

- All information is based on laboratory testing. Different chamber size and conditions will affect data.
- Maximum inputs for packaged blower versions are given for the standard combustion air blower without an inlet air filter.
- All inputs are based on gross calorific values and standard conditions: one atmosphere,  $70^{\circ}$  F (21° C)
- 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.



## Performance Graphs Winnox WX1000





Input at low fire changes with ratio regulator adjustment.

### Secondary by-pass fuel setting:

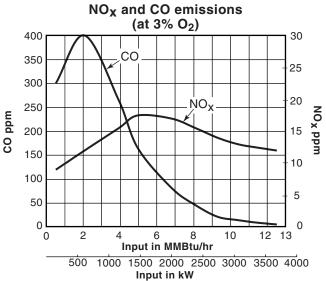
FUEL	∆ <b>P "w.c. (mbar)</b> *	
Nat. Gas	4.0 (10.0)	
Propane	4.0 (10.0)	
Butane	4.0 (10.0)	

\* Measured between Tap "E" and the chamber @ low fire.

#### Fuel / Input Measurement

System design must include fuel flow measurement upstream of the burner. Recommended is the Eclipse 12-5 FOM (Fuel Orifice Meter) assembly number 302050-5 for natural gas. See Bulletin 930 for details

Insure burner inlet pressures are met.



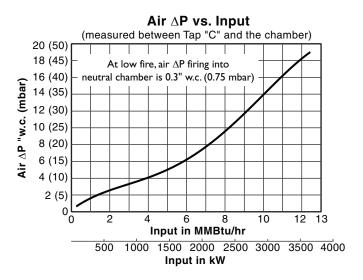
 $NO_x$  and CO emission data is given for:

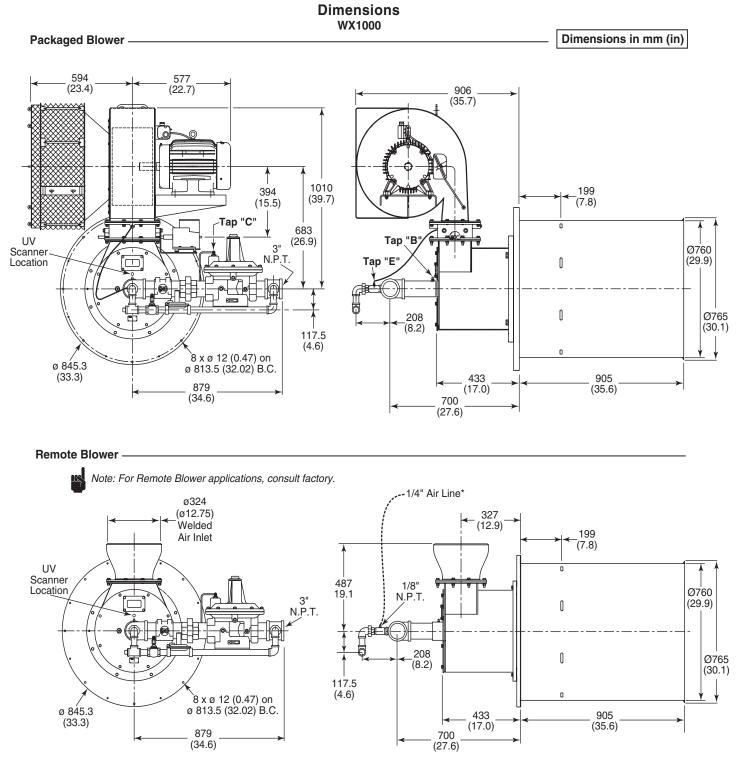
- Ambient combustion air (~70 °F, 20 °C)
- Less than 1000 °F (540 °C) firing chamber
- Minimal process air velocity
- Low fire input adjusted to 300,000 BTU/hr (88 kW)
- Neutral chamber pressure
- Natural gas

Emissions are influenced by:

- Chamber conditions
- Fuel type
- Firing rate
- Ratio regulator adjustments
- Combustion air temperature

CO emission is largely influenced by chamber conditions. Contact your local Eclipse Combustion representative for an estimate of CO emission on your application.





\* Recommended customer supplied 1/4" air line from upstream of the air control valve.



Eclipse Combustion

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