

Ultra-Low NO_x Pre-Mix Burner

APPLICATIONS:

- Low/moderate temperature heat treat
- Titanium heat treat
- Air heaters/dryers
- Food service
- Other specialized applications

FEATURES:

- Rugged fabricated construction-ideal for heavy duty industrial use
- Short, compact flame
- Moderate nominal velocity of approximately 350 ft/s
- Standard design suitable for operation up to 2,600°F chamber temperature

CAPABILITIES:

- Extremely low NO_x and CO emissions without FGR
- 20% to 60% excess air through burner, additional excess air may be introduced downstream of burner port
- Nominal capacities are available ranging from 0.25 - 1.0 MMBtu/hr. with ability to push to 1.5 MMBtu/hr.
- 5:1 turndown with standard design

NOTE: Due to continual developments in the Bloom Laboratory and results from field research, the applicability of different fuels and other options listed above are constantly being updated. Please consult a Bloom Representative to inquire about the availability of any guidelines/options that are not shown above.



FUEL CAPABILITIES*

Natural Gas \ Other High Btu Gaseous Fuels

*Please Consult a Bloom Representative for availability of other fuel types



BURNER IGNITION

Pilot (recommended) \ Direct Spark \ Manual



CONTROLS

Volumetric Fuel/Air Ratio (recommended) \
Electronically Linked Valves



FLAME MONITORING

UV Detector



OPTIONS

Custom Engineered Designs for Special Applications \
Gas Lance

1230S Series

Ultra-Low NO_x Pre-Mix Burner

TABLE 1 - Performance and Selection Chart at Nominal Capacity with 50% Excess Air and 100°F Air Temperature

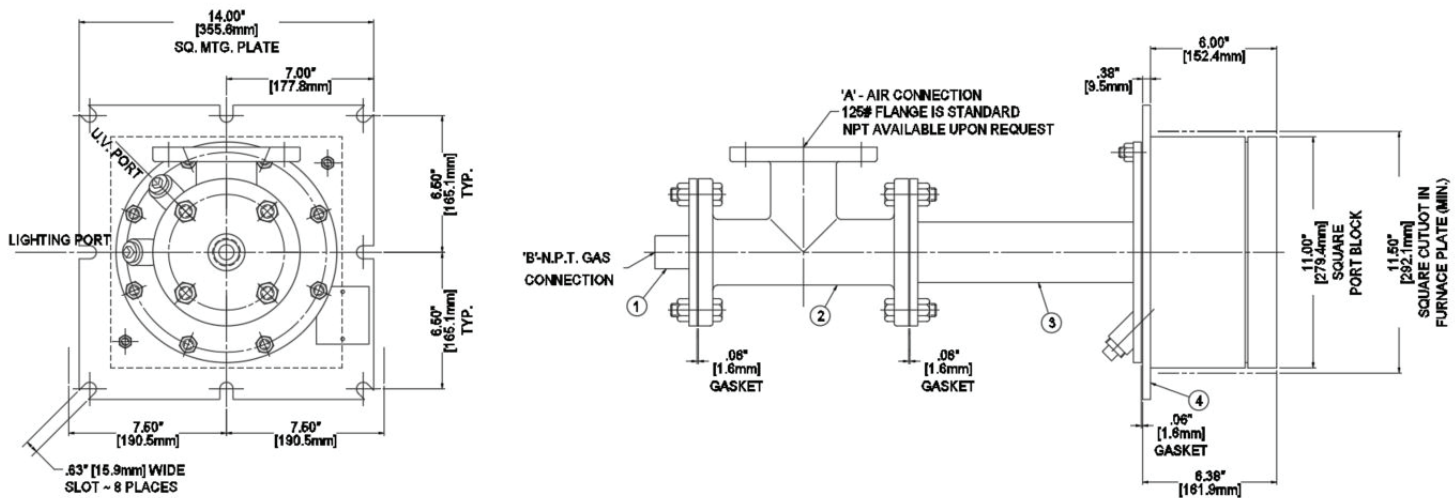
Burner Designation ¹ 1230S - ____	Nominal Natural Gas Capacity at 2.5 psig (172 mbar) Fuel Pressure		Air Capacity at 16.4" w.c. (41 mbar) Air Pressure		Flame Length ²		Flame Diameter ²		Pilot Part Number	Direct Spark Igniter Part Number
	scfh	Nm ³ /hr	scfh	Nm ³ /hr	inches	cm	inches	cm		
-250	250	6.7	3,750	100.5	18	46	3	8	3001-030	3500-123-AA
-333	333	8.9	4,995	133.9	25	64	3.5	9	3001-030	3500-123-AA
-500	500	13.4	7,500	201.1	30	76	4	10	3001-030	3500-123-AA
-750	750	20.1	11,250	301.6	34	86	5	13	3001-030	3500-123-AA
-999	999	26.8	14,985	401.7	36	91	6	15	3001-030	3500-123-AA

¹ Burner designation corresponds to the nominal rated capacity in 1,000 Btu/hr. (e.g. 1230S-250 --> 250,000 Btu/hr)

² Flame lengths and diameters are approximate with 50% excess air firing on natural gas

NOTE: Custom designs are available upon request. Please consult a Bloom Representative for more information.

TABLE 2 - Burner Dimensions for Burner Sizes 1230S-250 Through 1230S-999



General Dimensions (in inches)		
Burner Designation	'A'	'B'
1230S-250	2	1/2
1230S-333	2	1/2
1230S-500	2	3/4
1230S-750	2 1/2	1
1230S-999	2 1/2	1

General Dimensions (in millimeters)		
Burner Designation	'A'	'B'
1230S-250	50	15
1230S-333	50	15
1230S-500	50	20
1230S-750	65	25
1230S-999	65	25

Pilot/UV Connection Size		
Burner Designation	Pilot	UV
1230S-250	3/4" N.P.T.	3/4" N.P.T.
1230S-333	3/4" N.P.T.	3/4" N.P.T.
1230S-500	3/4" N.P.T.	3/4" N.P.T.
1230S-750	3/4" N.P.T.	3/4" N.P.T.
1230S-999	3/4" N.P.T.	3/4" N.P.T.

CAUTION: The improper use of combustion equipment can result in a condition hazardous to people and property. Users are urged to comply with National Safety Standards and/or Insurance Underwriters recommendations

1230S Series

Ultra-Low NO_x Pre-Mix Burner

To REQUEST A QUOTE: Please Contact your local representative at www.bloomeng.com/contact and provide the following information:

INFORMATION	UNITS
General Information:	
Application	
Burner Input	(MMBtu/hr; kcal/hr; kW) in (HHV or LHV)
Quantity of Burners	
Ignition Type and Fuel	
Main Fuel Information:	
Fuel (s) and Heating Value (s)	(Btu/ft ³ ; kcal/Nm ³ ; MJ/Nm ³) in (HHV or LHV)
Fuel Flow	(scfh; Nm ³ /hr)
Available Fuel Pressure	("w.c.; psi; mbar; kPa)
Fuel Constituents	
Combustion Air Information:	
Combustion Air Temperature	(°F; °C)
Combustion Air Pressure Available	("w.c.; psi; osi; mbar; kPa)
Minimum / Maximum Excess Air Required	(%)
Flame Information:	
Desired Flame Length	(feet; inches; m; mm)
Desired Flame Diameter	(feet; inches; m; mm)
Furnace / Combustion Chamber Information:	
Wall Thickness	(feet; inches; m; mm)
Burner Assembly / Connection Requirements	
Furnace / Chamber Dimensions or Drawings for Emissions estimate	
POC (Products of Combustion) / Furnace Temperature	(°F; °C)
Other Information:	
Operational / Control Requirements (i.e. Turndown, Control Type)	
Emissions Requirements (NO _x , CO)	
Chamber Backpressure	
Oil / Atomizing Agent Details	
Any other special requirements	

*** NOTE:** Information required to process a quote includes, but may not be limited to, the information specified above. Additional details may ALSO be required to quote a combustion control system.

CAUTION: The improper use of combustion equipment can result in a condition hazardous to people and property. Users are urged to comply with National Safety Standards and/or Insurance Underwriters recommendations