

1070 SERIES ULTRA LOW NO_xTM HOT OR COLD AIR BAFFLE BURNER

CAPABILITIES

- High release rates with moderate air
- Good turndown with flame characteristics and direction maintained
- Stable flames can be from highly oxidizing for tempered flame operation to highly reducing for maintaining atmospheres



FEATURES

- Rugged fabricated construction
- Patented low NO_x refractory baffle stabilization shields the burner internals from flame and it is a self supporting stable structure
- Suitable for operation at furnace temperature up to 2600°F (1427°C)
- Heat resistant alloy nozzle
- Provisions for flame monitoring
- Pilot or air assisted spark ignition available

CONTROL

- Volumetric fuel to air ratio control recommended.

FLAME MONITORING

- U.V. Detector
- Please contact your Bloom Representative for flame monitoring with residual oils

APPLICATIONS

- Slab Reheating Furnaces
- Ladle Dryers
- Billet Reheating Furnaces
- Ingot Heaters
- Air Heaters
- Hot Metal Mixer
- Boilers
- Copper and Aluminum Reverberatory Furnaces and many other applications

BURNER IGNITION

- Pilot
- Manual

FUEL CAPABILITIES

- Natural Gas
- ** LP Gas
- Coke Oven Gas
- * #2 Oil through #6 Oil and Tar
- Many other Applications

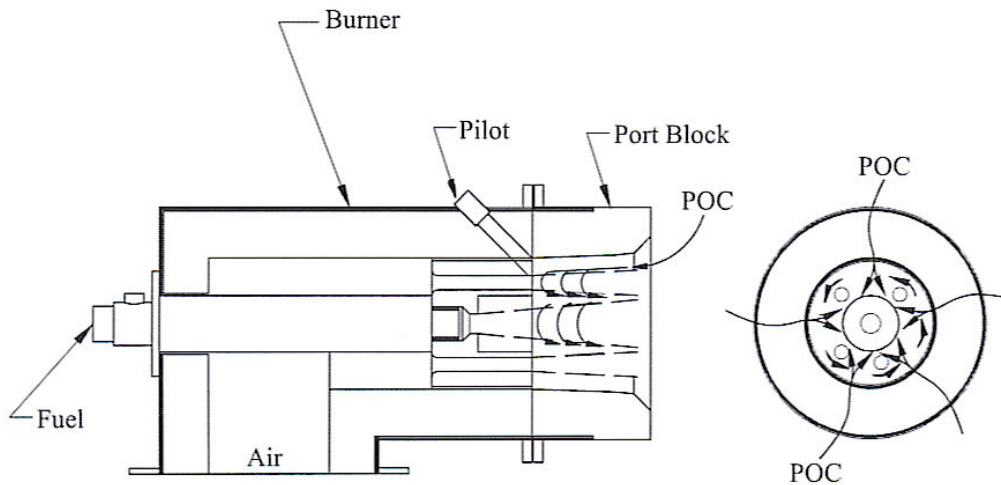
The Bloom 1070 Series refractory baffle burner is designed for gaseous and liquid fuels and it suitable, without change, for any gas having a heating value of approximately 500 Btu per cubic foot or greater. For designs burning lower heating value gases, contact your local representative or Bloom Pittsburgh.

* The Bloom baffle burner will operate equally as well on most oils. For distillate fuel oils, the burner is available with the 1800 FET Series atomizer. The 1800 FET series atomizer can be supplied with a retractable design, which permits operation on gas with oil burner in place or retracted.

** Turndown lance may be required.

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

1070 SERIES ULTRA LOW NO_xTM HOT OR COLD AIR BAFFLE BURNER



The Bloom 1070 Series Low NO_x burner utilizes Bloom's renowned low NO_x baffle. This same burner can also utilize external flue gas recirculation for additional NO_x control.

The standard 1070 Series burners are available in 6" through 24" body sizes with nominal capacities from 3 mm to 40 mm Btu/hour. The design principles of this burner allow it to be custom designed for applications requiring special mounting arrangements and/or extended turndown capabilities. The unique design of this burner utilizes recirculation of furnace gases into the flame for reduced NO_x emissions.

Bloom's low NO_x baffle design, combined with other geometric factors, optimizes the mixing of furnace gases with the burning air/fuel mixture. This reduces flame temperature and controls the chemical environment of the flame which depresses NO_x formation.

While the basic burner design utilizes internal flue gas recirculation to achieve reduced NO_x emissions rates, external flue gas recirculation can also be applied to this burner design. External flue gas recirculation can be used to dilute the combustion air supply such that the oxygen content of the vitiated air stream may be reduced down to approximately 19% oxygen.

This vitiated air supply is then delivered to the burners, resulting in a further reduction in NO_x emissions.

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1070 SERIES ULTRA LOW NO_x[™] HOT OR COLD AIR BAFFLE BURNER

**CAPACITY - SCFH (Nm³/hr), NO LANCE
10% EXCESS AIR**

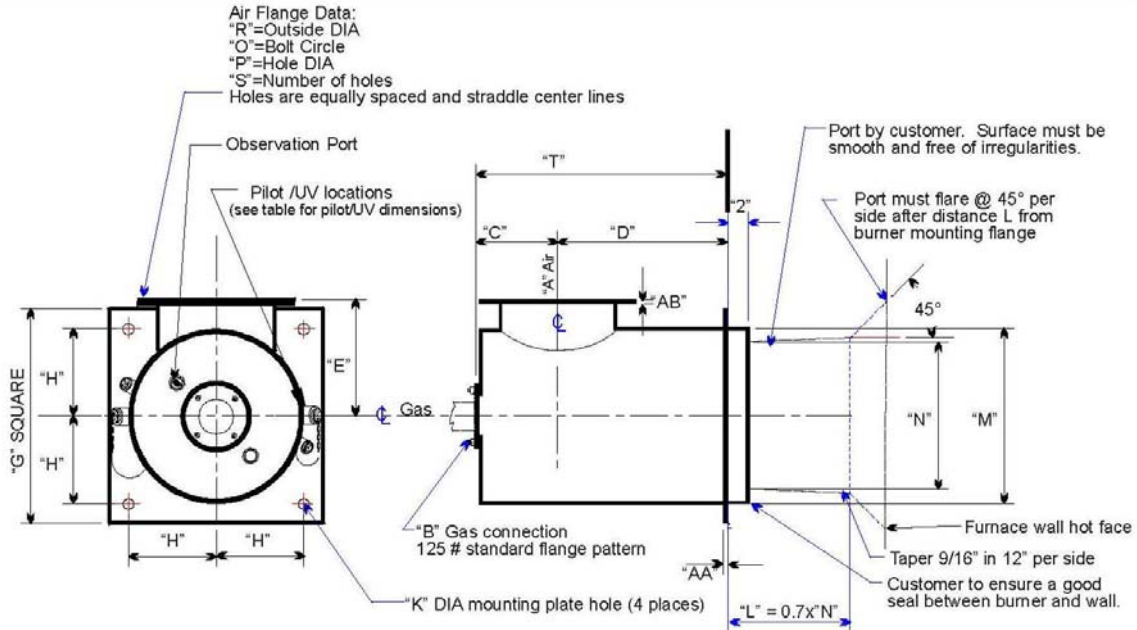
Catalog No. 1070-	Port ID Inches(mm)	12" wc (30 mbar)		6" wc (15 mbar)	
		1000°F (538°C)	600°F (315°C)	1000°F (538°C)	600°F (315°C)
009	8.5 (216)	24,541 664	23,980 648	17,358 469	16,951 458
010	9.5 (241)	33,220 898	31,570 854	23,485 635	22,319 603
012	11.75 (298)	57,090 1,543	48,290 1,305	40,370 1,091	34,144 923
014	14 (356)	80,960 2,188	68,552 1,853	57,244 1,547	48,447 1,309
016	16 (406)	105,820 2,860	89,546 2,420	74,822 2,022	63,316 1,711
018	18 (457)	133,870 3,618	113,520 3,068	94,655 2,558	80,124 2,165
020	20 (508)	165,275 4,467	139,898 3,781	116,864 3,158	98,923 2,674
022	22 (559)	199,980 5,405	169,279 4,575	141,405 3,822	119,702 3,235
024	24 (610)	237,930 6,430	201,454 5,445	168,245 4,547	142,450 3,850
026	26 (660)	284,680 7,694	241,000 6,513	201,300 5,440	170,412 4,605
028	28 (711)	329,780 8,913	279,125 7,544	233,189 6,302	197,373 5,334

NOTE: Standard Air Lance - Add 7% of combustion air flow

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GENERAL DIMENSIONS FOR -009 THRU -020



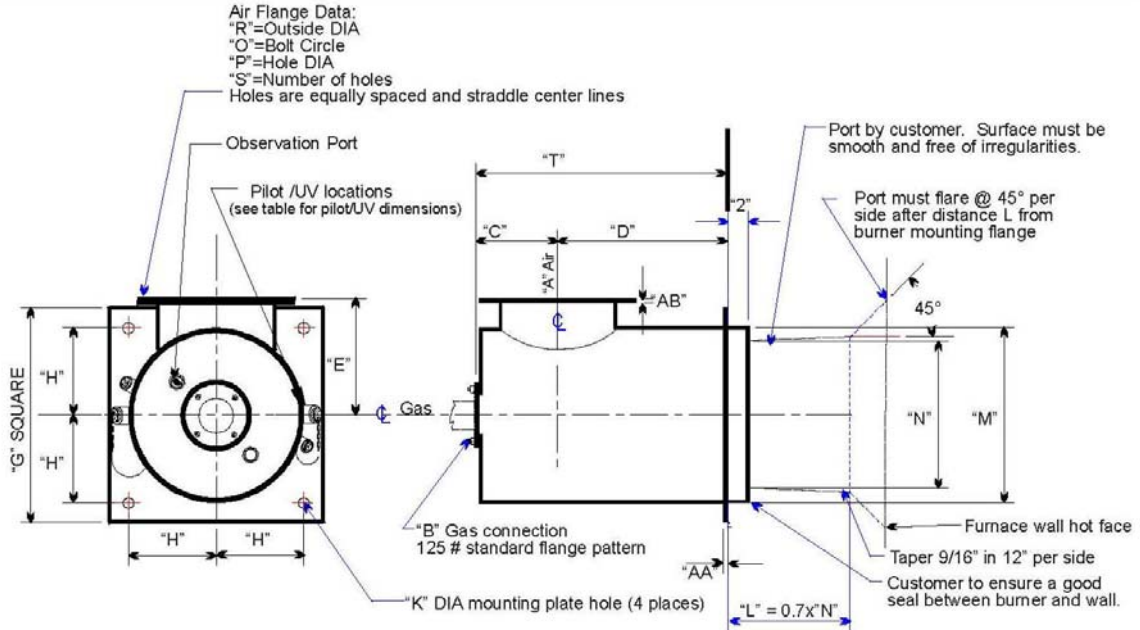
Catalog No. 1070-	General Dimensions (inches/mm)																
	A	B	C	D	E	G	H	K	M	N	O	P	R	S	T	AA	AB
009	6	1.5	5.38	11.5	8.75	16	6	.88	12.75	8.50	7.88	.63	8.69	8	16.88	.38	.5
	152	38	137	292	222	406	152	22	324	216	200	16	220	203	428	10	13
010	8	1.5	6.38	12.5	9.38	18	7	1.13	14	9.50	10	.63	10.81	8	18.88	.38	.5
	203	38	162	318	239	457	178	28	356	242	254	16	275	203	479	10	13
012	10	2	7.38	15	10.38	20	8	1.13	16	11.75	12.25	.75	14.06	12	22.38	.38	.5
	254	51	188	381	264	508	203	28	406	298	311	19	358	305	569	10	13
014	12	2.5	8.38	17	11.50	22	9	1.13	18	14	14.25	.75	16.06	12	25.38	.5	.5
	305	64	213	431	292	559	229	28	457	356	362	19	408	305	645	13	13
016	12	3	8.38	17	12.50	24	10	1.13	20	16	14.25	.75	16.06	12	25.38	.5	.5
	305	76	213	431	318	610	254	28	508	406	362	19	408	305	645	13	13
018	14	3	9.38	18	13.50	26	11	1.13	22	18	16.25	.75	18.06	12	27.38	.5	.5
	356	76	239	457	343	660	279	28	559	457	412	19	459	305	695	13	13
020	16	4	10.38	19	14.50	28	12	1.13	24	20	19.25	.75	21.25	16	29.38	.5	.5
	406	102	264	482	369	711	305	28	610	508	488	19	539	406	746	13	13

NOTE: GENERAL DIMENSION INFORMATION. SEE BLOOM REPRESENTATIVE FOR CERTIFIED DIMENSIONS FOR CONSTRUCTION

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1070 SERIES ULTRA LOW NO_x™ HOT OR COLD AIR BAFFLE BURNER

GENERAL DIMENSIONS FOR -022 THRU -028



Catalog No. 1630-	General Dimensions (inches/mm)																
	A	B	C	D	E	G	H	K	M	N	O	P	R	S	T	AA	AB
022	18	4	11.38	20	15.50	30	13	1.13	26	22	21.25	.75	23.25	16	31.38	.5	.5
	457	102	289	508	394	762	330	28	660	559	539	19	590	406	797	13	13
024	18	4	11.38	20	16.50	32	14	1.38	28	24	21.25	.75	23.25	16	31.38	.63	.5
	457	102	289	508	419	813	356	35	711	610	539	19	590	406	797	16	13
026	20	6	12.38	21	17.75	35	15	1.38	30	26	23.13	.75	25.25	20	33.38	.63	.5
	508	152	315	533	450	889	381	35	762	660	587	19	641	508	848	16	13
028	22	6	13.38	22	18.75	37	16	1.50	32	28	26	.75	28.25	20	35.38	.63	.5
	559	152	340	559	476	939	406	38	813	711	660	19	717	508	899	16	13

Pilot UV Connection Dimensions			
Catalog No. 1070-	Pilot Size	Pilot Coupling (npt)	UV Coupling (npt)
009-012	3001-050	1"	3/4"
014-020	3001-100	1 1/4"	3/4"
022-028	3001-150	1 1/2"	3/4"

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