

Eclipse Vortometric

Burners

Series "MI"

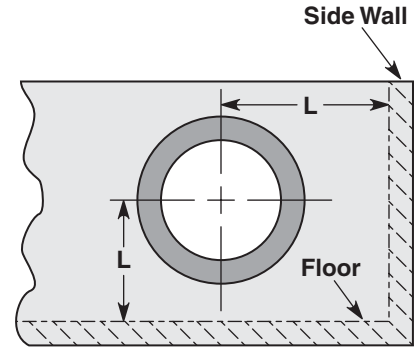
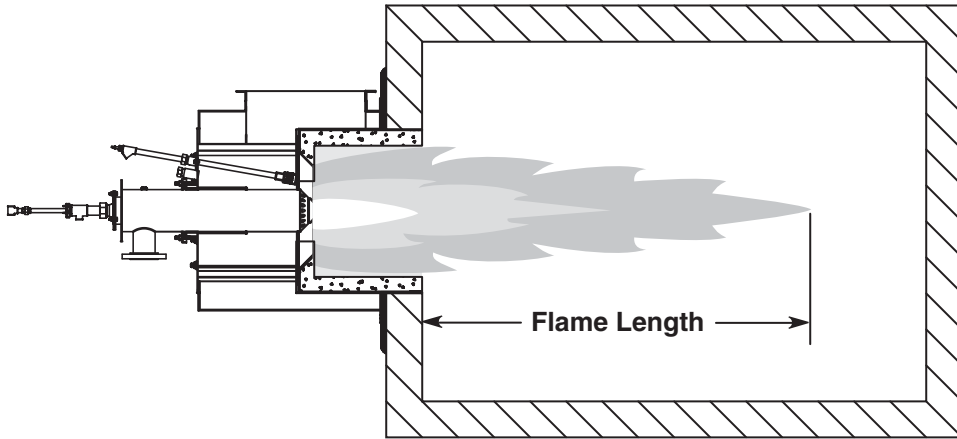
Parameter		Specifications											
		Burner Model											
		6V	8V	10V	12V	14V	16V	18V	22V	24V	28V	32V	36V
Max. Input MM Btu/hr.		6	10.5	17	23	32	42	55	78	90	125	160	210
Min. Input MM Btu/hr.	Natural Gas	.3	.5	.8	1.0	1.3	1.5	2.0	2.7	3.0	5.0	6.0	7.0
Combustion Air (1)	Flow SCFM	1,150	2,000	3,200	4,300	5,900	7,800	10,200	14,400	16,600	23,100	29,500	38,700
	ΔP " w.c.	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Natural Gas (2)	Flow SCFH x 1000	6	10.5	17	23	32	42	55	78	90	125	160	210
	Nozzle ΔP " w.c.	24	24	24	24	24	24	46	46	46	46	46	46
Fuels	Gases	Natural, propane, butane, manufactured and other mixed gases.											
Flame Detection		UV or infrared scanner.											
Pilot		Raw gas pilot. Natural gas or propane.											
Preheated Combustion Air		500 deg. F. maximum. Contact Eclipse for burner sizing recommendations with preheated air.											
Burner Type		Smaller diameter, longer flame compared to HI Series burners											
Burner Refractory		Burners can be provided with a factory installed refractory combustion block. Plibrico SR-85 refractory is standard.											
Refractory wrapper		A 304 SS refractory wrapper is supplied standard with factory installed refractory. Optional with field installed refractory.											
Combustion Chamber Options		\leq 1200 deg. F. Alloy Combustor. $>$ 1200 deg. F. Refractory (Plibrico SR-85).											
Fuel Guns	Gas Only	Gas gun only supplied. Fuel ports sized for natural gas. For other gases, contact Eclipse.											
Firing Rotation		Burner can be supplied with CW or CCW firing rotation to suit application.											
Air, Gas, Pilot Orientation		Air inlet, gas inlet, and pilot orientations required when ordering.											
Packaged Burners		Packaged burners available including valve trains, combustion air blowers, flame supervision and controls.											

(1) Combustion air flows and pressure drops at 15% excess air at standard conditions. (70 deg. F. 14.7 psia)

(2) Natural gas capacities based on gross heating value 1000 Btu/SCF, 0.6 Specific Gravity.

- Burner minimum inputs stated for modulating combustion air.
- Air and natural gas pressure drops should be taken as a differential pressure between the air/gas at the burner and the chamber pressure.
- Eclipse reserves the right to change the construction and/or configuration of our products at any time without being obligated to adjust earlier supplies accordingly.

Installation Clearances

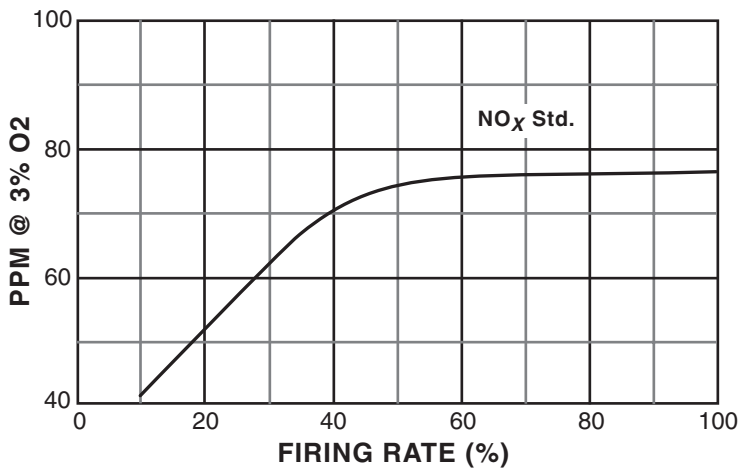


Combustion Chamber Clearances

Burner Model	Flame Size		Installation Clearance "L" in Inches
	Dia. Inches	Length Ft.	
6V	28	6.0	18
8V	30	7.0	19
10V	34	8.0	21
12V	38	9.0	23
14V	42	10.5	26
16V	46	12.0	30
18V	50	13.0	32
22V	56	15.0	35
24V	60	16.0	40
28V	70	18.0	45
32V	76	20.0	50
36V	84	24.0	56

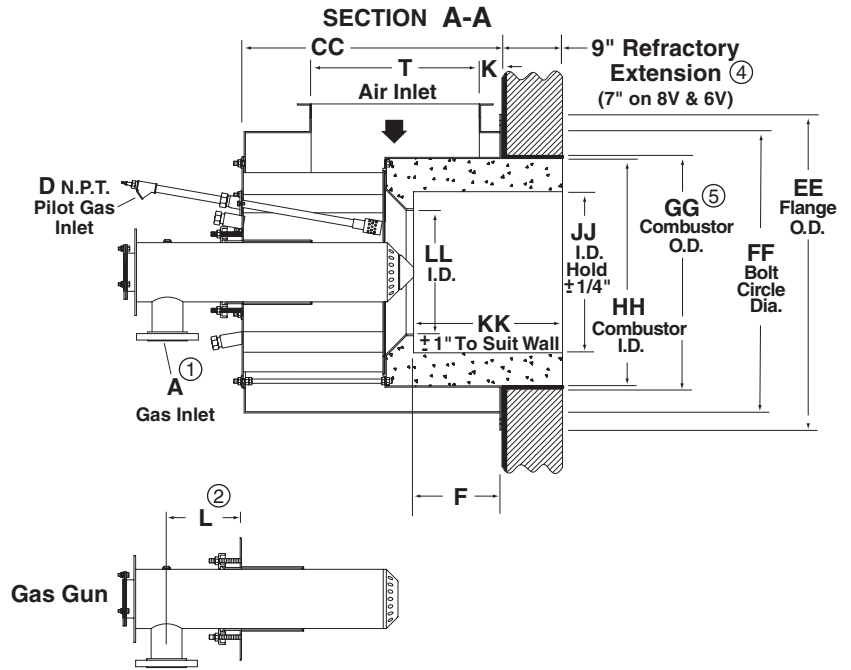
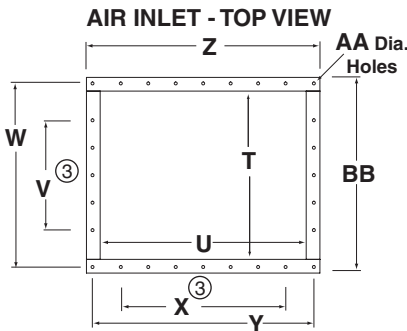
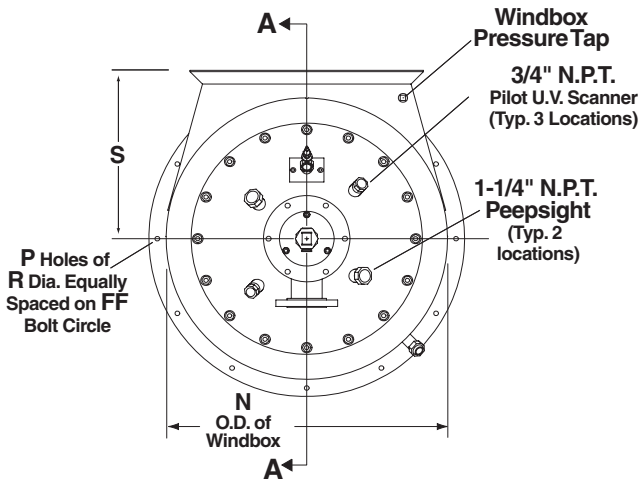
- Flame lengths provided are estimates based on general operating conditions and are useful for design purposes. Actual flame lengths will depend on chamber size and presence of secondary air.
- Installation clearance can be reduced when using a high temperature refractory combustion chamber.

NO_x Emissions Natural Gas



- Burner emissions depend on chamber design and temperature. Contact Eclipse for specific emissions estimates for your application.

Dimensions



An ultraviolet flame sensing device (U.V. scanner) may be mounted in three locations. Two scanner mounting ports (3/4" NPT) are located near the gun assembly adjacent to the pilot. A third port (3/4" NPT) is provided on the side of the combustor. The pilot scanner location can be used to prove both the pilot and main flame.

Burner Size	Dimensions in Inches												
	A	B	C	D	F	K	L	M	N	P	R	S	T
6V	2	3/4	1/2	3/4	4	6	8	31	25	12	11/16	16	9
8V	2-1/2	3/4	1/2	3/4	4	6	8	31	25	12	11/16	16	9
10V	3	1	3/4	3/4	4-3/4	6	9-1/4	35	28	12	11/16	17-1/2	12
12V	3	1	3/4	3/4	6	6	9-1/4	37	31	12	11/16	19	15
14V	3	1	3/4	3/4	8-13/16	6	10	40	34-1/2	12	11/16	21-1/2	18
16V	4	1-1/2	1	3/4	10	6	10-1/2	45	37	12	11/16	22-1/2	21
18V	4	1-1/2	1	3/4	12-1/2	6	11	48	41	12	11/16	24-1/2	24-1/2
22V	4	1-1/2	1	1-1/4	16	6	12-1/4	53	45-1/2	12	11/16	27-1/2	30
24V	6	2	1-1/4	1-1/4	17	6	12-1/4	59	50	16	11/16	30	33
28V	6	2	1-1/4	1-1/4	21-1/2	6	12	65	54-1/2	16	11/16	32	38-1/2
32V	6	2-1/2	1-1/2	1-1/4	24	6	12	71	59	16	11/16	35	45
36V	8	2-1/2	1-1/2	1-1/2	28	6	12	80	64	24	11/16	38	51-1/2

Burner Size	Dimensions in Inches																
	U	V	W	X	Y	Z	AA	BB	CC	EE	FF	GG	HH	JJ-Refractory	JJ-Alloy	KK	LL
6V	14-1/2	1	10-3/4	2	16-1/4	17-1/2	7/16	12	17	30	27-1/2	20-3/8	20	11	21-3/16	11	8
8V	18-1/2	1	10-3/4	4	20-1/4	21-1/2	7/16	12	17	30	27-1/2	20-3/8	20	11	21-3/16	11	8
10V	21	1	13-3/4	4	22-3/4	24	7/16	15	20	33	30-1/2	22-3/8	22	13-1/2	23-3/16	13-3/4	10
12V	23	2	16-3/4	5	24-3/4	26	7/16	18	23-1/2	36	33-1/2	25-7/8	24-1/2	15-1/2	25-11/16	15	12
14V	26	3	20-1/4	6	28-1/4	30	7/16	22	28-1/4	39-1/2	37	28-7/8	27	18	28-3/16	17-13/16	14
16V	28	3	23-1/4	5	30-1/4	32	7/16	25	32	42	39-1/2	30-7/8	29-1/2	20-1/2	30-11/16	19	16
18V	30	4	26-3/4	6	32-1/4	34	7/16	28-1/2	37-3/4	46	43-1/2	33-7/8	32-1/2	23	33-11/16	21-1/2	18
22V	34	6	32-3/4	8	36-3/4	39	9/16	35	45-1/4	50-1/2	48	38-7/8	37	27-1/2	38-3/16	25	22
24V	37	6	35-3/4	7	39-3/4	42	9/16	38	49	56	53	41-7/8	40	30	41-3/16	26	24
28V	41	8	41-1/4	8	43-3/4	46	9/16	43-1/2	59	60-1/2	57-1/2	45-7/8	44	34	45-3/16	30-1/2	28
32V	59	9	47-3/4	13	61-3/4	64	9/16	50	66-1/4	65	62	49-7/8	48	38	49-3/16	33	32
36V	64	11	54-1/4	15	66-3/4	69	9/16	56-1/2	75-3/4	70	67	54-7/8	53	43	54-3/16	37	36

- ① Burner sizes 8V through 14V are N.P.T. threaded; all other sizes are ANSI, RF, 150 lb. flanged.
- ② These dimensions will vary ±1-1/2".
- ③ Indicates number of spaces, 4" apart.
- ④ Stainless Steel wrapper holding refractory extension, extends full length of refractory extension.
- ⑤ Ensure that furnace wall I.D. is 1" greater than GG. See Section 3 of Installation Guide 248.



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