



Vortometric Burners

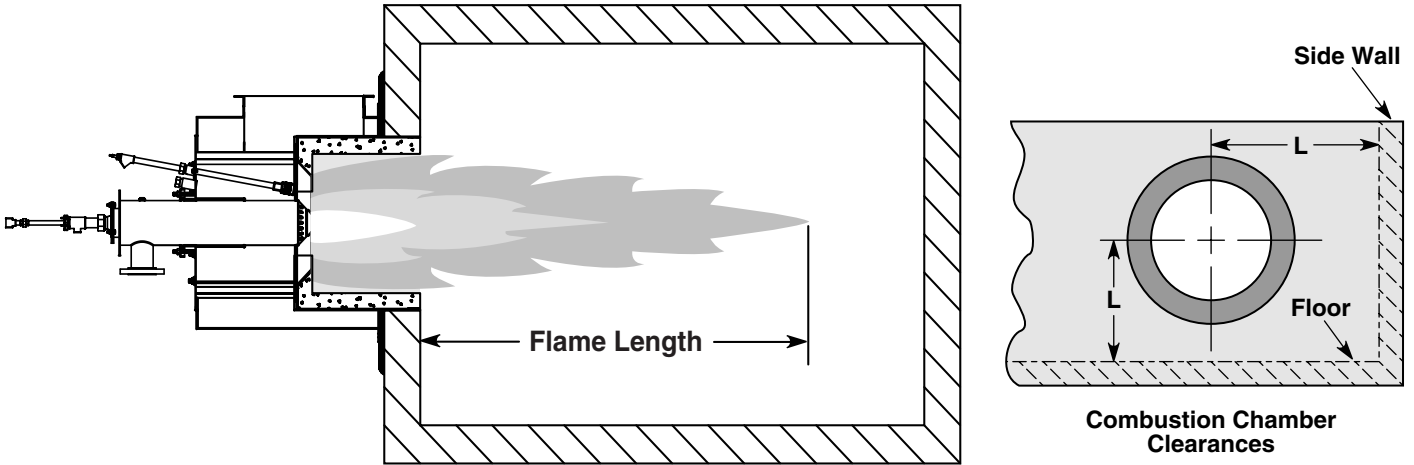
Series "HI"

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
	No. 2 Oil	1.0	1.5	2.5	3.0	4.0	5.5	7.0	10.0	12.0	16.0	20.0	26.0
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
No. 2 Fuel Oil (3)	Oil Flow GPH	43	75	121	164	229	300	393	557	643	893	1,143	1,500
	Nozzle ΔP " psig	25	35	55	55	50	60	60	60	60	60	60	60
Atomizing Air (4)	Flow SCFM	25	39	63	85	118	155	202	288	332	461	590	775
	ΔP " psig.	45	55	55	55	55	55	55	55	55	55	55	55
Atomizing Steam (5)	Flow lb/hr.	72	113	184	248	345	454	594	842	972	1,350	1,728	2,268
	ΔP " psig.	45	65	55	55	55	55	55	55	55	55	55	55
Fuels	Gases	Natural, propane, butane, manufactured and other mixed gases.											
	Oils	Light and heavy oils.											
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	Shorter, high intensity flame compared to MI Series burners.												
Burner Refractory	Burners can be provided with a factory installed refractory combustion block. Pliibrico SR-85 refractory is standard.												
Refractory Wrapper	A 304 SS refractory wrapper is supplied standard with factory installed refractory. Optional with field installed refractory.												
Fuel Guns	Gas Only	Gas gun only supplied. Fuel ports sized for natural gas. For other gases, contact Eclipse.											
	Oil Only	Oil gun is supplied with support tube arrangement.											
	CGO	Both oil and gas guns provided for combination gas / oil burners.											
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.
 (3) Oil firing capacities for No. 2 fuel oil with gross heating value 140,000 Btu/gal. Maximum 150 SSU viscosity required for all oils.
 (4) Atomizing air to be supplied in a dry, clean condition.
 (5) Atomizing steam to be supplied with a minimum 20 deg. F. superheat.

- 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.

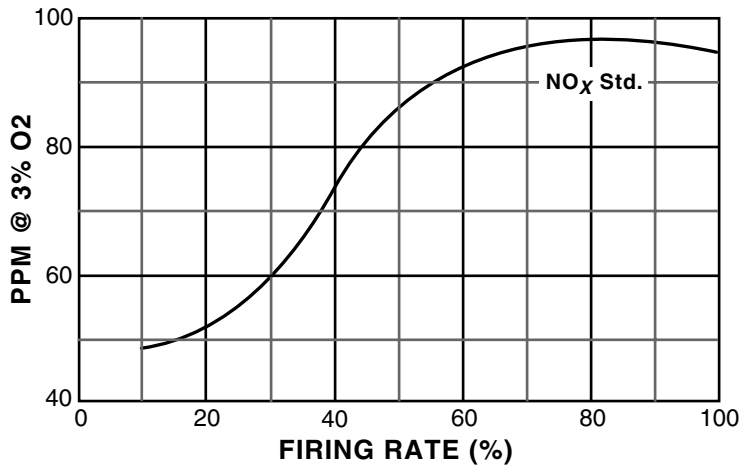
Installation Clearances



Burner Model	Flame Size		Installation Clearance "L" in Inches
	Dia. Inches	Length Ft.	
6V	30	5.0	19
8V	32	6.0	20
10V	36	7.0	22
12V	40	8.0	25
14V	46	9.0	28
16V	52	10.0	32
18V	58	11.0	35
22V	64	13.0	40
24V	68	14.0	44
28V	78	16.0	50
32V	86	17.0	55
36V	96	20.0	60

- 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.

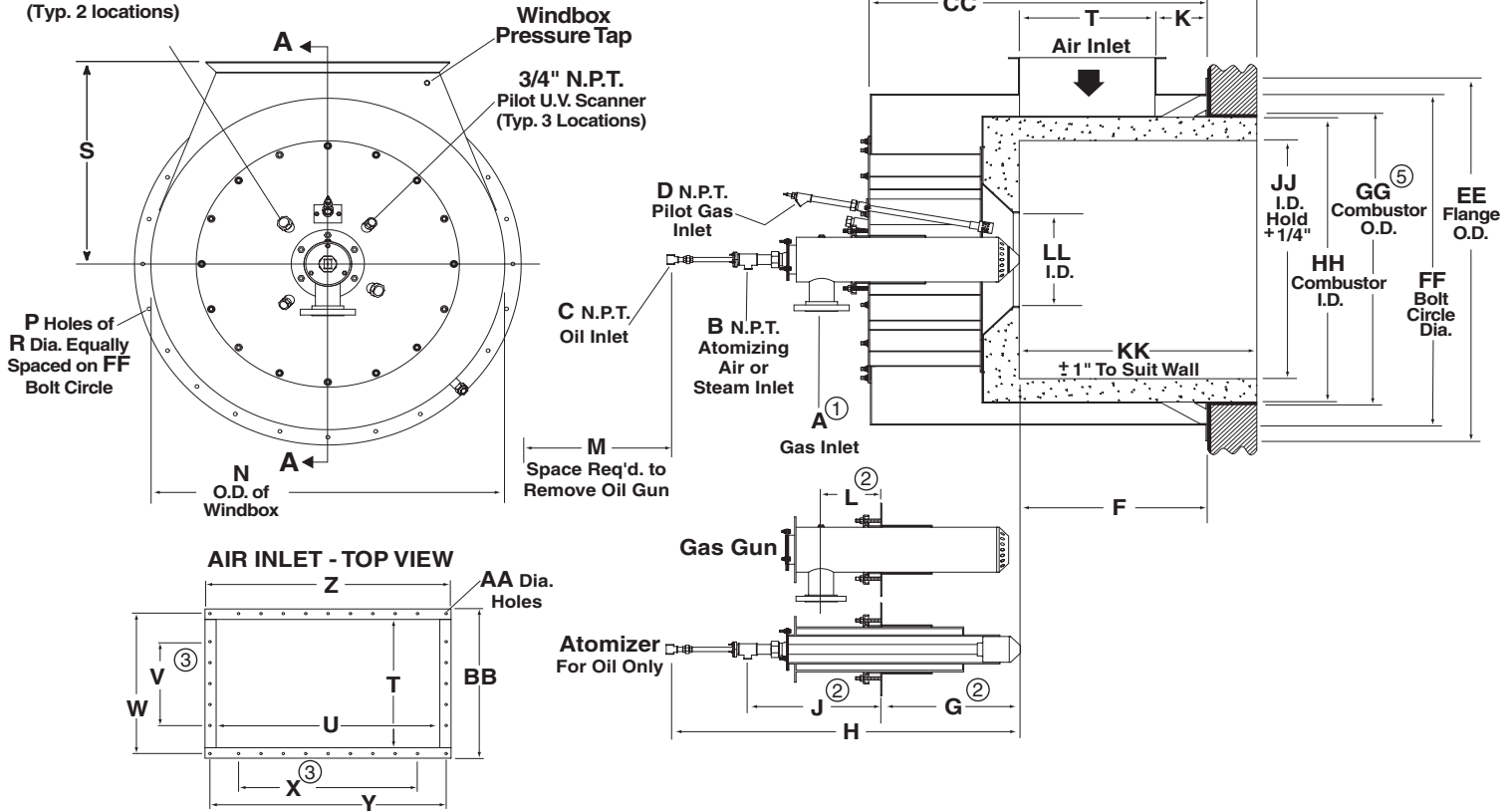
NO_x Emissions, Natural Gas



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

Dimensions

1-1/4" N.P.T Peepsight
(Typ. 2 locations)



An ultraviolet flame sensing device (U.V. scanner) may be mounted in three locations. Two scanner mounting ports (3/4" N.P.T.) are located near the gun assembly adjacent to the pilot. A third port (3/4" N.P.T.) is provided on the side of the combustor. For gas or light oil with air atomization, 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	G	H	J	K	L	M	N	P	R	S	T
6V	1-1/4	3/4	1/2	3/4	5-1/2	10-3/4	41-3/4	19	6	8-1/2	29-3/4	29	12	11/16	18	11-3/4
8V	2-1/2	3/4	1/2	3/4	13	12	43	19	6	8-1/2	31	34	12	11/16	20-3/4	9
10V	3	1	3/4	3/4	17-1/2	15-1/4	47	19-3/4	6	9-1/4	35	40	12	11/16	24-1/2	12
12V	3	1	3/4	3/4	21	17-1/2	49	19-1/2	6	9	37	45	12	11/16	28	15
14V	3	1	3/4	3/4	26	20-3/4	55	20-1/4	8	9-1/4	40	52	16	13/16	32	18
16V	4	1-1/2	3/4	3/4	29	23-1/2	60	22-1/2	8	9	45	57	16	13/16	35	21
18V	4	1-1/2	3/4	3/4	34	26-1/2	63	22-1/2	9-1/2	9	48	64	24	13/16	39	24-1/2
22V	4	1-1/2	1-1/4	1-1/4	41	31-1/2	71	23-1/2	11	9	53	75	24	13/16	46-1/2	30
24V	6	2	1-1/4	1-1/4	43-1/2	34	76	26	10-1/2	11	59	80	32	13/16	49	33
28V	6	2	1-1/4	1-1/4	51	40-1/2	84	25-1/2	12-1/2	10-1/2	65	94	32	13/16	58	38-1/2
32V	6	2-1/2	1-1/2	1-1/2	57	45-1/2	92	27-1/2	12	11	71	104	40	13/16	65	45
36V	8	2-1/2	1-1/2	1-1/2	65	52	100	29	13-1/2	12	80	118	48	13/16	74	51-1/2

Burner Size	Dimensions in Inches															
	U	V	W	X	Y	Z	AA	BB	CC	EE	FF	GG	HH	JJ	KK	LL
6V	13-9/16	1	13	2	16-5/16	17-9/16	7/16	14-1/4	18-3/4	34	31-1/2	24-3/8	24	16	14-1/2	6
8V	21	1	10-3/4	4	22-3/4	24	7/16	12	25	39	36-1/2	30-3/8	30	21	22	8
10V	25	1	13-3/4	4	26-3/4	28	7/16	15	32-3/4	45	42-1/2	35-3/8	35	26	26-1/2	10
12V	28	2	16-3/4	5	29-3/4	31	7/16	18	38-1/2	50	47-1/2	39-3/8	39	30	30	12
14V	32	3	20-1/4	6	34-1/4	36	7/16	22	46-3/4	58	55	45-3/8	45	36	35	14
16V	36	3	23-1/4	7	38-1/4	40	7/16	25	52-1/2	63	60	50-3/8	50	41	38	16
18V	40	4	26-3/4	8	42-1/4	44	7/16	28-1/2	60-1/2	70	67	55-3/8	55	46	43	18
22V	47	6	32-3/4	10	49-3/4	52	9/16	35	72-1/2	81	78	64-3/8	64	55	50	22
24V	50	6	35-3/4	11	52-3/4	55	9/16	38	77-1/2	86	83	67-3/8	67	58	52-1/2	24
28V	59	8	41-1/4	13	61-3/4	64	9/16	43-1/2	91-1/2	100	97	80-3/8	80	68	60	28
32V	65	9	47-3/4	14	67-3/4	70	9/16	50	102-1/2	110	107	88-3/8	88	76	66	32
36V	74	11	54-1/4	17	76-3/4	79	9/16	56-1/2	117	124	121	98-3/8	98	86	74	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 holding refractory 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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