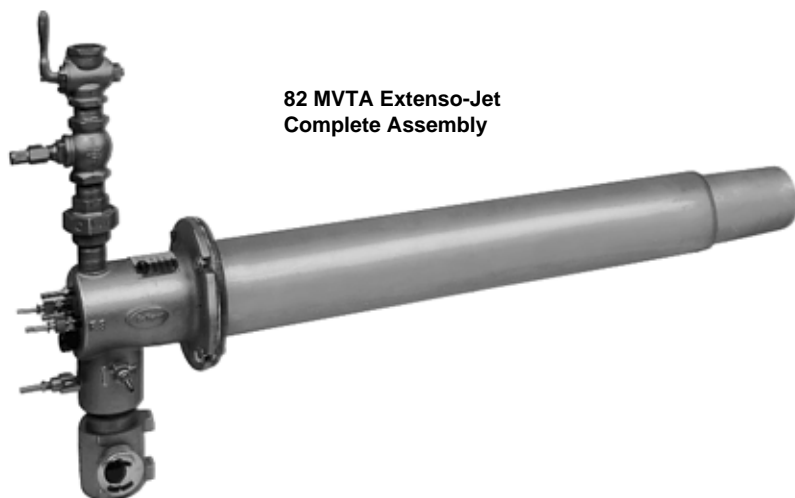


# ECLIPSE EXTENSO-JET BURNERS

## SERIES "E"

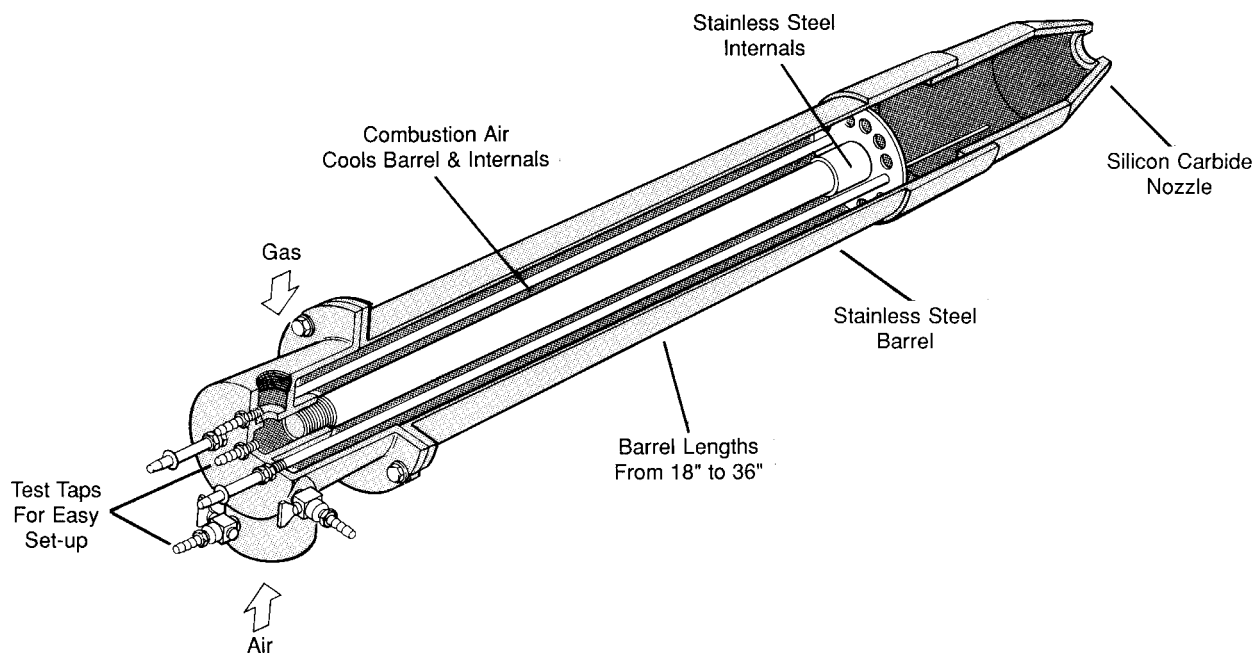


82 MVTA Extenso-Jet  
Complete Assembly

- Easy mounting in thick walls.
- Medium or high velocity exhaust.
- Excellent temperature uniformity & product quality.
- Increased efficiency.
- Up to 400% excess air.
- Up to 30:1 turndown.
- Excess fuel capability.

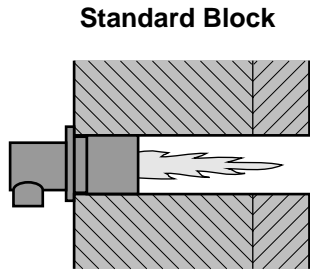
The ceramic, brick, and tile industries have traditionally built thick kiln walls to conserve heat during long curing times. Standard velocity burners are difficult to mount in such walls, and the benefits of their high velocity discharge are largely lost within the firebrick. To solve these problems, Eclipse developed the Extenso-Jet burner.

The Extenso-Jet's stainless steel barrel positions a silicon carbide nozzle flush with the inner face of the kiln wall. The nozzle discharges an intense jet of hot gases directly into the kiln, improving temperature uniformity and product quality. Burner installation is simple in both new and retrofitted kilns.

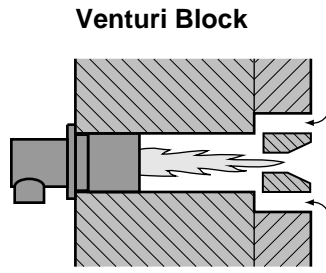


*Eclipse Combustion*

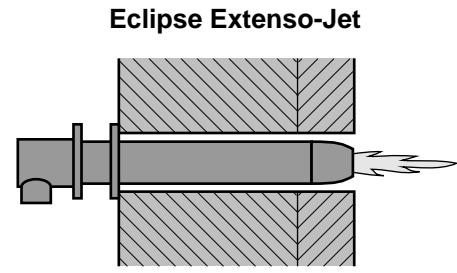
# EXTENSO-JET—THE PERFECT THICKWALL BURNER



Buries flame in thick wall;  
heat & velocity are lost.



Improves circulation, but  
complicates brickwork.



Puts flame in kiln for maximum  
heat & circulation; easy installation.

## CAPACITIES

With natural gas (0.65 S.G) and ambient air.

### 82E MVTA (Medium Velocity)

<b>Combustion Air Flow in SCFH</b>		<b>750</b>	<b>1000</b>	<b>2000</b>	<b>3000</b>	<b>4000</b>
<b>On-Ratio Operation</b>	Static Air Press. at Tap "A," "w.c.	0.4	0.8	2.5	4.8	10.1
	Air ΔP Between Taps "A" & "C," "w.c.	0.3	0.6	1.0	2.6	6.4
	Static Gas Press. at Tap "B," "w.c.	0.3	0.5	2.0	4.6	8.3
	Gas ΔP Between Taps "B" & "C," "w.c.	0.15	0.25	1.0	1.9	3.5
<b>Excess Air Operation</b>	Capacity in 1000's Btu/Hr.	75	100	200	300	400
	Approx. Flame Length, Inches	18	18	20	24	24
<b>Excess Air Operation</b>	Minimum Gas Flow, SCFH	20	25	50	75	80
	% Excess Air	275	300	300	300	400

### 82E HVTA (High Velocity)

<b>Combustion Air Flow in SCFH</b>		<b>750</b>	<b>1000</b>	<b>2000</b>	<b>3000</b>	<b>4000</b>
<b>On-Ratio Operation</b>	Static Air Press. at Tap "A," "w.c.	0.6	1.1	4.0	7.9	16.4
	Air ΔP Between Taps "A" & "C," "w.c.	0.3	0.6	2.0	2.4	6.7
	Static Gas Press. at Tap "B," "w.c.	0.5	0.8	2.5	4.6	14.5
	Gas ΔP Between Taps "B" & "C," "w.c.	0.1	0.2	1.0	1.9	3.5
<b>Excess Air Operation</b>	Capacity in 1000's Btu/Hr.	75	100	200	300	400
	Approx. Flame Length, Inches	12	12	15	18	18
<b>Excess Air Operation</b>	Minimum Gas Flow, SCFH	20	25	50	75	80
	% Excess Air	275	300	300	300	400

## CAPACITIES (Continued)

### 83E MVTA (Medium Velocity)

Combustion Air Flow in SCFH		1000	2000	3000	4000	5000	6000
<b>On-Ratio Operation</b>	Static Air Press. at Tap "A," "w.c.	0.35	1.5	1.5	7.0	11.0	17.2
	Air $\Delta$ P Between Taps "A" & "C," "w.c.	0.25	0.8	1.05	4.0	7.0	13.0
	Static Gas Press. at Tap "B," "w.c.	0.3	1.0	1.8	4.5	7.0	10.3
	Gas $\Delta$ P Between Taps "B" & "C," "w.c.	0.1	0.6	0.85	2.0	2.4	3.4
Capacity in 1000's Btu/Hr. Approx. Flame Length, Inches		100 24	200 24	300 24	400 24	500 24	600 24
<b>Excess Air Operation</b>	Minimum Gas Flow, SCFH	20	40	60	90	125	140
	% Excess Air	400	400	400	350	300	330

### 83E HVTA (High Velocity)

Combustion Air Flow in SCFH		1000	2000	3000	4000	5000	6000
<b>On-Ratio Operation</b>	Static Air Press. at Tap "A," "w.c.	0.25	2.0	3.2	8.0	11.0	20.3
	Air $\Delta$ P Between Taps "A" & "C," "w.c.	0.2	1.0	1.0	4.5	6.0	12.2
	Static Gas Press. at Tap "B," "w.c.	0.3	2.0	3.8	6.5	9.5	14.2
	Gas $\Delta$ P Between Taps "B" & "C," "w.c.	0.1	0.5	0.8	1.5	2.0	3.3
Capacity in 1000's Btu/Hr. Approx. Flame Length, Inches		100 18	200 18	300 18	400 18	500 18	600 24
<b>Excess Air Operation</b>	Minimum Gas Flow, SCFH	20	50	75	100	125	140
	% Excess Air	400	300	300	300	300	330

### 84E MVTA (Medium Velocity)

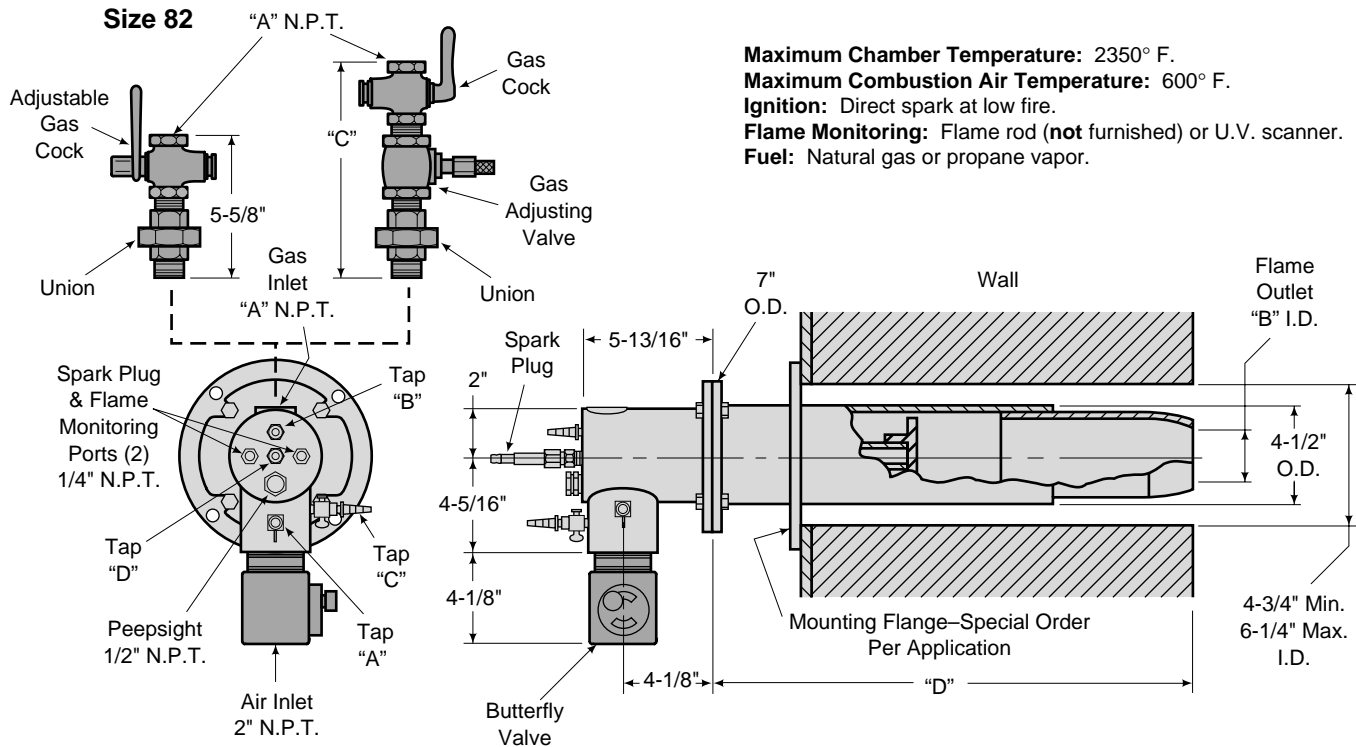
Combustion Air Flow in SCFH		1500	3000	5000	7000	9000
<b>On-Ratio Operation</b>	Static Air Press. at Tap "A," "w.c.	0.55	2.5	5.5	12.0	20.8
	Air $\Delta$ P Between Taps "A" & "C," "w.c.	0.4	1.8	4.0	7.5	15.8
	Static Gas Press. at Tap "B," "w.c.	0.7	2.5	6.0	11.0	18.6
	Gas $\Delta$ P Between Taps "B" & "C," "w.c.	0.15	1.0	2.0	2.5	5.2
Capacity in 1000's Btu/Hr. Approx. Flame Length, Inches		150 24	300 24	500 24	700 24	900 24
<b>Excess Air Operation</b>	Minimum Gas Flow, SCFH	50	85	125	170	250
	% Excess Air	200	250	300	310	260

### 84E HVTA (High Velocity)

Combustion Air Flow in SCFH		1500	3000	5000	7000	9000
<b>On-Ratio Operation</b>	Static Air Press. at Tap "A," "w.c.	1.0	2.5	7.0	14.0	23.8
	Air $\Delta$ P Between Taps "A" & "C," "w.c.	0.4	1.3	4.0	7.5	14.4
	Static Gas Press. at Tap "B," "w.c.	0.8	3.0	7.5	13.0	22.9
	Gas $\Delta$ P Between Taps "B" & "C," "w.c.	0.1	0.5	2.0	2.5	5.1
Capacity in 1000's Btu/Hr. Approx. Flame Length, Inches		150 24	300 24	500 24	700 24	900 24
<b>Excess Air Operation</b>	Minimum Gas Flow, SCFH	50	85	125	170	250
	% Excess Air	200	250	300	310	260

# DIMENSIONS & SPECIFICATIONS

## Sizes 83 & 84



**Maximum Chamber Temperature:** 2350° F.  
**Maximum Combustion Air Temperature:** 600° F.  
**Ignition:** Direct spark at low fire.  
**Flame Monitoring:** Flame rod (not furnished) or U.V. scanner.  
**Fuel:** Natural gas or propane vapor.

- Basic burner assembly. Includes a spark plug, but not a flame rod.
- Additional items included with complete assembly.

### Dimensions

Burner Size	Assembly Number Prefix				"A" Gas Inlet	"B" Flame Outlet		"C" Valve Length	"D" Burner Length
	MVTA		HVTA			MV	HV		
	Basic	Complete	Basic	Complete					
82 E	117407-	117414-	117400-	117411-	1/2	1-7/8	1-7/16	5-1/8	See Below
83 E	117409-	117415-	117403-	117412-	3/4	2-1/4	1-7/8	9-1/2	
84 E	117410-	117416-	117405-	117413-	1	2-3/4	2-1/4	10	

Dimensions are in inches.

MVTA=Medium Velocity

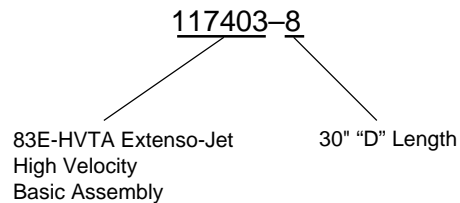
HVTA=High Velocity

### Dimension D, Spark Plugs & Flame Rods\*

Assembly Number Suffix	"D" Length	Flame Rod Number	Spark Plug Number
-4	18	100602-2	150000-27
-5	21	100602-3	150000-19
-6	24	100602-4	150000-49
-7	27	100602-5	150000-79
-8	30	100602-6	150000-10
-9	33	100602-7	150000-13
-10	36	100602-8	150000-16

\* Spark plug is included with the burner.  
Flame rod must be ordered separately.

### Ordering Example



Eclipse Combustion