

# Eclipse AirHeat Burners

AH-MA Series

Worksheet Edition 6.11

Version 2

Customer P.O. _____	Eclipse S.O. _____
Customer _____	Eclipse Rep _____
Customer Signature _____	Eclipse Rep Signature _____
Date _____	Date _____

## Ordering Information

In designing your system, the following must be completed:

- **Use page 2 to sketch your system:**  
Follow the instructions on page 2 for designing a burner system. Be certain to use the appropriate symbol for each burner and plate section in laying out your application. Also, include the corresponding number for each symbol; numbering each symbol will help in determining the quantity you must order for each respective burner and end plate section. If necessary, refer to the burner sketch example on page 4.
- **Use page 3 to determine quantities:**  
After sketching out your system and numbering the symbols, add the number of each respective symbol used and enter that sum in the "Selection" column of the corresponding Table on page 3 (if necessary, please refer to the example on page 4).
- **How pricing is determined:**  
See the 160 AH-MA Config price list for current price information.



elster  
Thermal Solutions

**Graph for Designing Burner System**

Flame direction is into the page (as if viewing the back of burner).

Use the appropriate section symbols and numbers as shown.





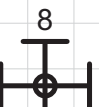












Determine the sum of each numbered section and add that number in the corresponding Table number on page 3.

If necessary, refer to the burner sketch layout

example on page 4.

Pre-order Entry Engineering Check: \_\_\_\_\_

**Section Symbols & Numbers for Designing the Burner System**

 4 150mm (6") Straight	 5 300mm (12") Straight	 6 300mm (12") Straight with Back Inlet	 7 300mm x 150mm (12" x 6") Tee	 8 300mm x 300mm (12" x 12") Cross	 9 Plain End Plate	 10 Pilot End Plate No Feed	 11 Pilot End Plate 1" Gas Feed	
 12 Pilot End Plate 1.5" Gas Feed 2" Gas Feed	 13 Pilot End Plate	 14* Pilot Angled Mon. End Plate No Feed	 15* Flame Monitoring End Plate	 16 Angled Flame Mon. End Plate	 17* Burner Feed End Plate with Flame Monitoring	 18 Burner Feed End Plate	 24 Divider Plate for Staged Burners	 25 Hanger Rod Mounting Bracket

\* Direct spark ignition up to 18" long (450 mm) uses the flame monitoring end plate or burner feed with flame monitoring end plate #14, #15 or #17 with ignition plug #19 and/or flame rod #20 or #21.

Post-Assembly Inspection: \_\_\_\_\_

**Ordering List**

- Determine the sum of each numbered section on page 2 and add that number in the corresponding Table number below.
- Tables 1 through 15 apply to the overall burner system layout and the necessary figures to achieve it.
- Tables 16 through 22 determine the costs of the overall burner system.
- If necessary, refer to the ordering list example on page 4.

Table No.	Description	Selection	Lineal Ft. Multiplier	Lineal Ft. Subtotal
1	<u>Gas Manifold</u>			
	Aluminum	_____		
	Corrosion Resistant CI	_____		
	Cast Iron	_____		
	Aluminum	_____		
	Cast Iron	_____		
	<u>Pressure</u>			
	Standard	_____		
	<u>Gas Ports</u>			
	Ø2.0mm	_____		
	Ø2.0mm	_____		
	Ø2.4mm	_____		
	Ø2.4mm	_____		
	Ø2.0mm	_____		
	<u>Option</u>			
	A	_____		
	C	_____		
	L	_____		
	P	_____		
	S	_____		
2	Assembled system (enter A) or Individual sections (enter I)	_____		
3	B.S.P (enter B) or N.P.T (enter N) pipe threads	_____		
4	Number of 150mm straight sections	_____	X 0.5 =	_____
5	Number of 300mm straight sections	_____	X 1.0 =	_____
6	Number of 300mm straight section with back inlet	_____	X 1.0 =	_____
7	Number of 150mm by 300mm tee sections	_____	X 1.5 =	_____
8	Number of 300mm by 300mm cross sections	_____	X 2.0 =	_____
9	Number of plain end plates	_____		
10	Number of pilot end plates with no feed	_____		
11	Number of pilot end plates with 1" Gas Feed	_____		
12	Number of pilot end plates with 1.5" Gas Feed	_____		
13	Number of pilot end plates with 2" Gas Feed	_____		
14	Number of pilot angled flame monitoring end plates	_____		
15	Number of flame monitoring end plates	_____		
16	Number of angled flame monitoring end plates	_____		
17	Number of burner feed end plates with flame monitoring	_____		
18	Number of burner feed end plates	_____		
	Total lineal feet of burner system (add Tables 4 through 10 subtotals for total lineal feet)			
	cost per lineal foot for aluminum burner bodies (AP) .....		x _____ =	\$ _____
	cost per lineal foot for cast iron burner bodies (L,S) .....		x _____ =	\$ _____
	cost per lineal foot for optional corrosion resistant burner bodies (C) ...		x _____ =	\$ _____
19	Number of ignition plugs(must use with items 10 - 14) .....		x /each =	\$ _____
20	Number of flame rods .....		x /each =	\$ _____
21	Number of U.V.scanner adapters,1/2" N.P.T. ....		x /each =	\$ _____
22	Number of U.V.scanner adapters,3/4" N.P.T. (use w/ #15 or #17 only) .....		x /each =	\$ _____
23	Number of U.V.scanner adapters,1" N.P.T. (use w/ #15 or #17 only) .....		x /each =	\$ _____
24	Number of divider plates for staging .....		x /each =	\$ _____
25	Number of hanger rod mounting brackets .....		x /each =	\$ _____
26	Certified drawing charge .....		=	\$ _____
	TOTAL LIST PRICE .....		=	\$ _____
	SCHEDULE I DISCOUNT MULTIPLIER .....		x	_____
	TOTAL NET PRICE .....		=	\$ _____

### Burner Sketch & Ordering List Example

In this example, the sketch depicts a two stage burner with flame rod flame detection on both stages. The ordering list summarizes the component quantities of the system drawn in the sketch.

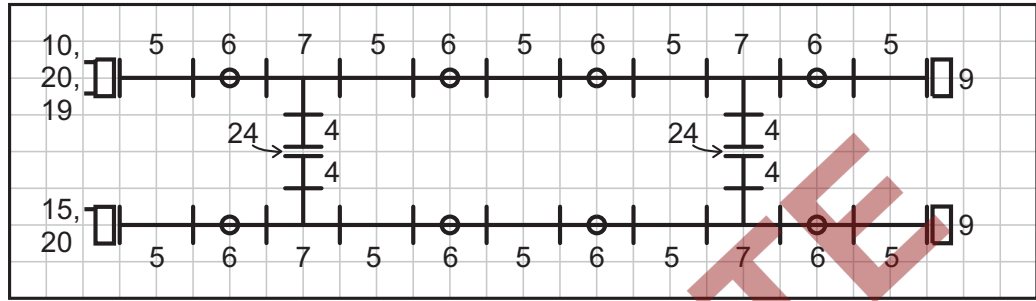


Table No.	Description				Selection	Lineal Ft. Multiplier	Lineal Ft. Subtotal
1	Gas Manifold	Pressure	Gas Ports	Option			
	Aluminum	Standard	Ø2.0mm	A			
	Corrosion Resistant CI	Standard	Ø2.0mm	C	CF		
	Cast Iron	Low	Ø2.4mm	L			
	Aluminum	Low	Ø2.4mm	P			
	Cast Iron	Standard	Ø2.0mm	S	S		
2	Assembled system (enter A) or Individual sections (enter I)				A		
3	B.S.P (enter B) or N.P.T (enter N) pipe threads				N		
4	Number of 150mm straight sections				4	X 0.5 =	2
5	Number of 300mm straight sections				10	X 1.0 =	10
6	Number of 300mm straight section with back inlet				8	X 1.0 =	8
7	Number of 150mm by 300mm tee sections				4	X 1.5 =	6
8	Number of 300mm by 300mm cross sections				0	X 2.0 =	0
9	Number of plain end plates				2		
10	Number of pilot end plates with no feed				1		
11	Number of pilot end plates with 1" Gas Feed				0		
12	Number of pilot end plates with 1.5" Gas Feed				0		
13	Number of pilot end plates with 2" Gas Feed				0		
14	Number of pilot angled flame monitoring end plates				0		
15	Number of flame monitoring end plates				1		
16	Number of angled flame monitoring end plates				0		
17	Number of burner feed end plates with flame monitoring				0		
18	Number of burner feed end plates				0		
	Total lineal feet of burner system (add Tables 4 through 10 subtotals for total lineal feet)						
	cost per lineal foot for aluminum burner bodies (AP) .....					x 0 =	\$ 0
	cost per lineal foot for cast iron burner bodies (L,S) .....					x 26 =	\$
	cost per lineal foot for optional corrosion resistant burner bodies (C) ...					x 0 =	\$ 0
19	Number of ignition plugs (must use with items 10 - 14) .....					1 x /each =	\$
20	Number of flame rods .....					2 x /each =	\$
21	Number of UV scanner adapters, 1/2" N.P.T. ....					0 x /each =	\$ 0
22	Number of UV scanner adapters, 3/4" N.P.T. (use w/ #15 or #17 only) .....					0 x /each =	\$ 0
23	Number of UV scanner adapters, 1" N.P.T. (use w/ #15 or #17 only) .....					0 x /each =	\$ 0
24	Number of divider plates for staging .....					2 x /each =	\$
25	Number of hanger rod mounting brackets .....					x /each =	\$
26	Certified drawing charge .....					=	\$
	TOTAL LIST PRICE .....					=	\$
	SCHEDULE I DISCOUNT MULTIPLIER .....					x	
	TOTAL NET PRICE .....					=	\$