



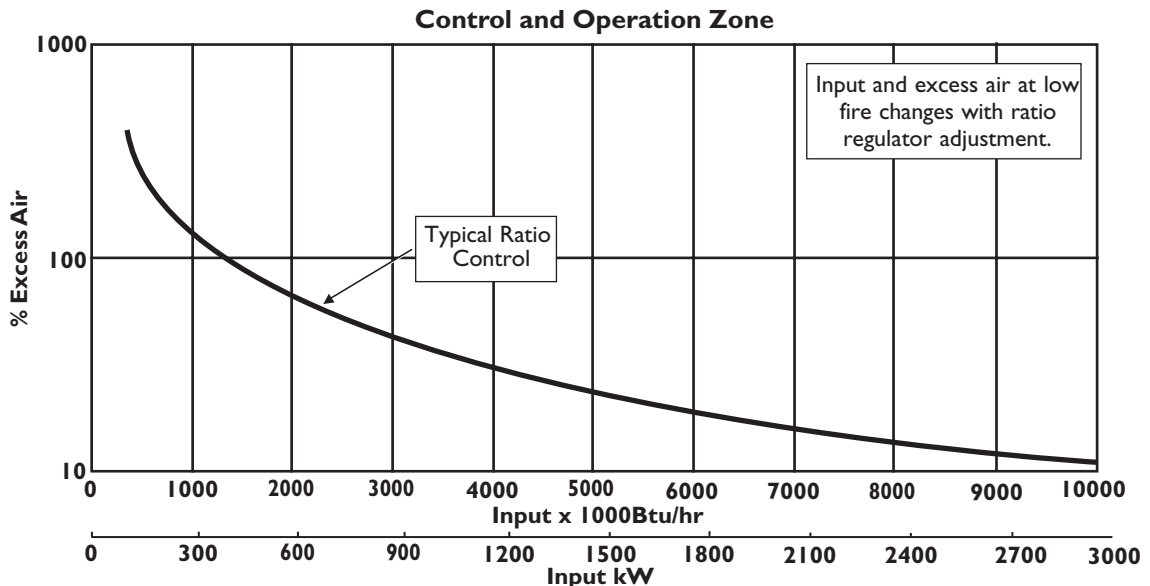
RatioAir Burners

Model RA1000
Version 1

Main Specifications - RA1000

| PARAMETER | | SPECIFICATIONS | |
|---|----------------|---|-----------------------------|
| Maximum input, Btu/hr (kW) at neutral chamber conditions. (Natural Gas) 60Hz Packaged Blower 50Hz Packaged Blower | | Straight Tube | Medium Velocity Tube |
| | | 10,250,000 (3004) | 10,030,000 (2940) |
| | | 10,250,000 (2974) | 9,950,000 (2916) |
| Minimum input, Btu/hr (kW) • Lower inputs may be achieved. Contact factory. | | 350,000 (102) | 350,000 (102) |
| Main Gas Inlet Pressure, "w.c. (mbar) • Fuel pressure at ratio regulator inlet. | | 20 to 55 (50 to 137) | 20 to 55 (50 to 137) |
| High Fire Flame Length, inches (mm) • Measured from the outlet end of the combustor. | | 180 (4572) | 149 (3785) |
| Maximum Flame Velocity, ft/s (m/s) • Approximately 15% excess air at maximum input. | | ----- | 250 (75) |
| Maximum chamber temperature, °F (°C) | Alloy tube | 1500 (816) | 1750 (954) |
| | Block & Holder | 1900 (1038) | 2800 (1538) |
| Flame detection | | UV scanner only | |
| Fuel | | Natural Gas (For any other gas, contact Eclipse Combustion for orifice sizing.) | |

- All information is based on laboratory testing in neutral (0.0" w.c.) chamber with standard combustor design. Different chamber conditions will affect the data.
- Maximum inputs are given for the standard combustion air blower without an air filter.
- All inputs based upon gross calorific values and standard conditions: 1 atmosphere, 70° F (21 °C).
- Blower motor service factors greater than 1.0 may be required when firing into negative chamber pressure applications. For specific application questions, contact your Eclipse Combustion representative.
- Eclipse reserves the right to change the construction and/or configuration of our products at any time without being obliged to adjust earlier supplies accordingly.



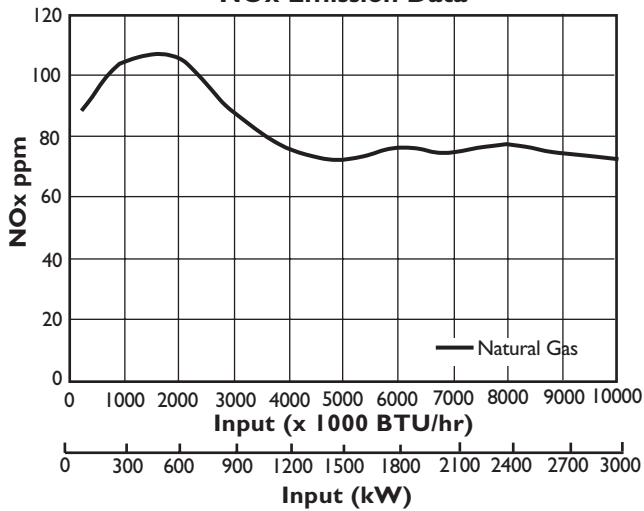
Straight Tube Specifications

Blower Model

60Hz, 7B (10" w.c. @ 110,000 scfh, 7.5 hp)
50Hz, 7B (10" w.c. @ 110,000 scfh, 5.5 kW)

| Specifications | | | | | | |
|--|--------------|------|----------------------|------|----------------------|------|
| Parameter | "w.c. (mbar) | | 60Hz Packaged Blower | | 50Hz Packaged Blower | |
| | | | Btu/hr | kW | Btu/hr | kW |
| Maximum Input vs. Chamber Pressure (Natural Gas) | -2.0 | -5.0 | 10,900,000 | 3192 | 10,800,000 | 3162 |
| | -1.0 | -2.5 | 10,550,000 | 3089 | 10,500,000 | 3075 |
| | 0.0 | 0.0 | 10,250,000 | 2935 | 10,150,000 | 2972 |
| | 1.0 | 2.5 | 9,900,000 | 2898 | 9,800,000 | 2870 |
| | 2.0 | 5.0 | 9,550,000 | 2796 | 9,450,000 | 2767 |

NOx Emission Data



NOx emission data is given for:

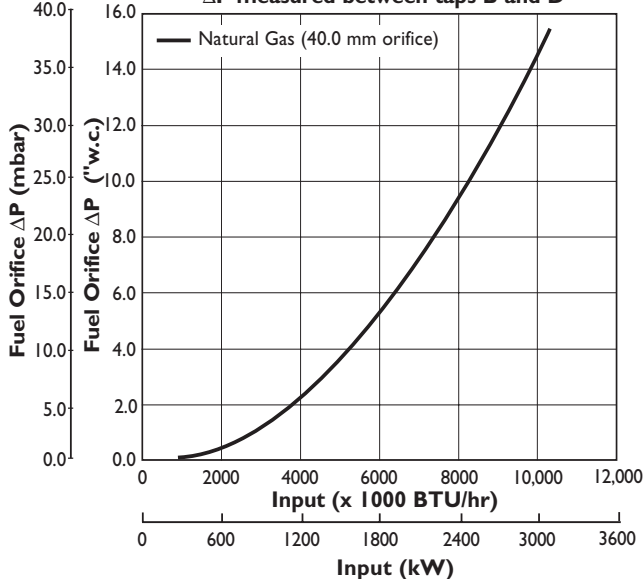
- Ambient combustion air ~70°F (20°C)
- Less than 1000°F (538°C) firing chamber
- Minimal process air velocity
- ppm volume dry at 3% O₂
- Neutral chamber pressure

CO emission is largely influenced by chamber conditions. Contact your local Eclipse Combustion representative for an estimate of CO emission on your application.

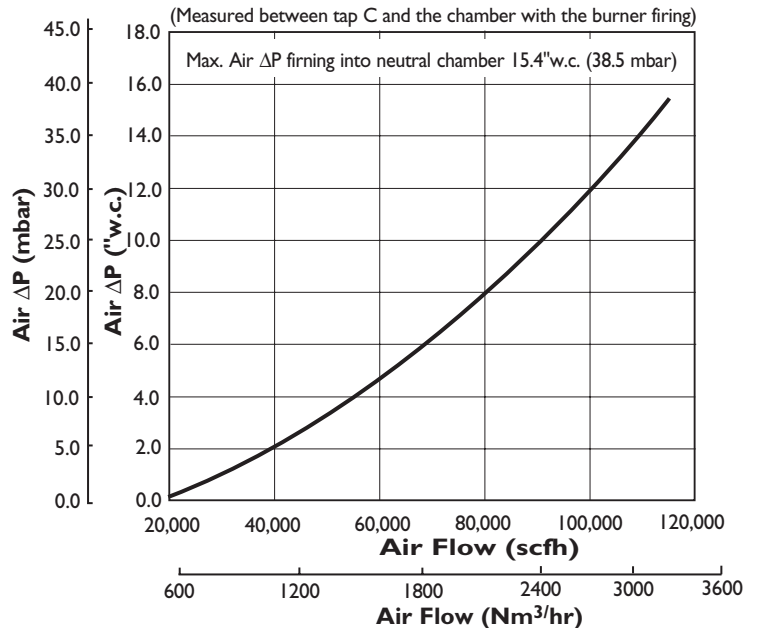
Emissions are influenced by:

- Chamber conditions
- Fuel type
- Firing rate
- Ratio regulator adjustment
- Combustion air temperature

Fuel Orifice ΔP vs. Input
 ΔP measured between taps B and D



Air ΔP vs. Air Flow



Medium Velocity Tube Specifications

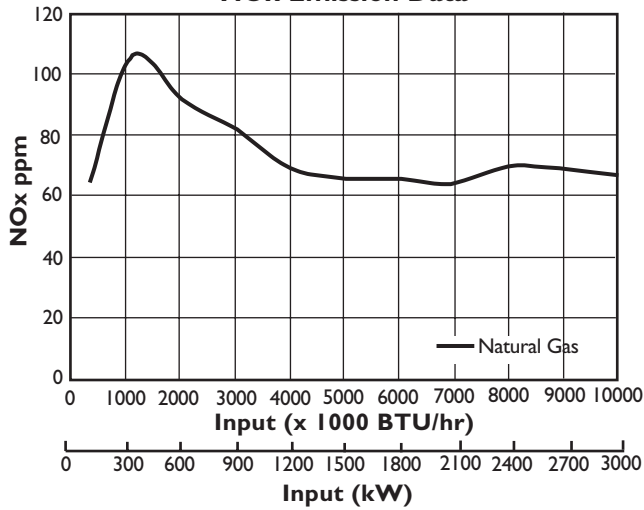
Blower Model

60Hz, 7B (10" w.c. @ 110,000 scfh, 7.5 hp)

50Hz, 7B (10" w.c. @ 110,000 scfh, 5.5 kW)

| Specifications | | | | | | |
|--|--------------|------|----------------------|------|----------------------|------|
| Parameter | "w.c. (mbar) | | 60Hz Packaged Blower | | 50Hz Packaged Blower | |
| | | | Btu/hr | kW | Btu/hr | kW |
| Maximum Input vs. Chamber Pressure (Natural Gas) | -2.0 | -5.0 | 10,650,000 | 3118 | 10,550,000 | 3089 |
| | -1.0 | -2.5 | 10,350,000 | 3030 | 10,250,000 | 3001 |
| | 0.0 | 0.0 | 10,030,000 | 3016 | 9,950,000 | 2913 |
| | 1.0 | 2.5 | 9,700,000 | 2840 | 9,650,000 | 2825 |
| | 2.0 | 5.0 | 9,400,000 | 2752 | 9,300,000 | 2723 |

NOx Emission Data



NOx emission data is given for:

- Ambient combustion air ~70°F (20°C)
- Less than 1000°F (538°C) firing chamber
- Minimal process air velocity
- ppm volume dry at 3% O₂
- Neutral chamber pressure

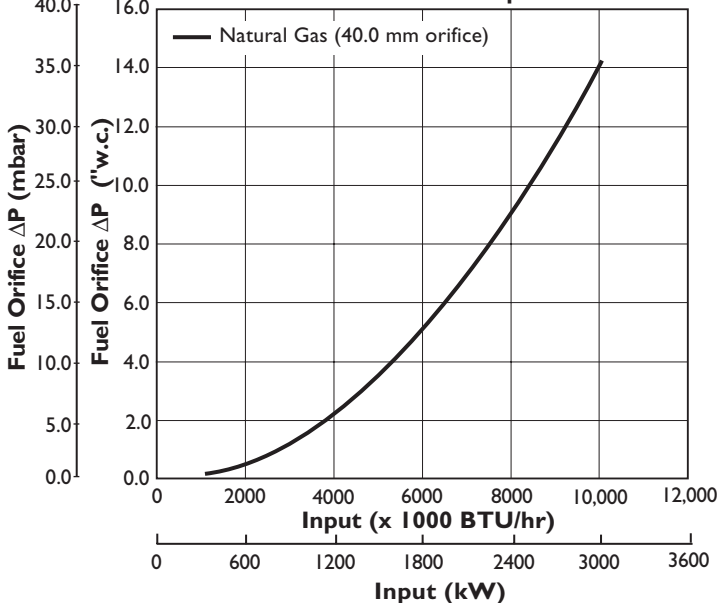
CO emission is largely influenced by chamber conditions. Contact your local Eclipse Combustion representative for an estimate of CO emission on your application.

Emissions are influenced by:

- Chamber conditions
- Fuel type
- Firing rate
- Ratio regulator adjustment
- Combustion air temperature

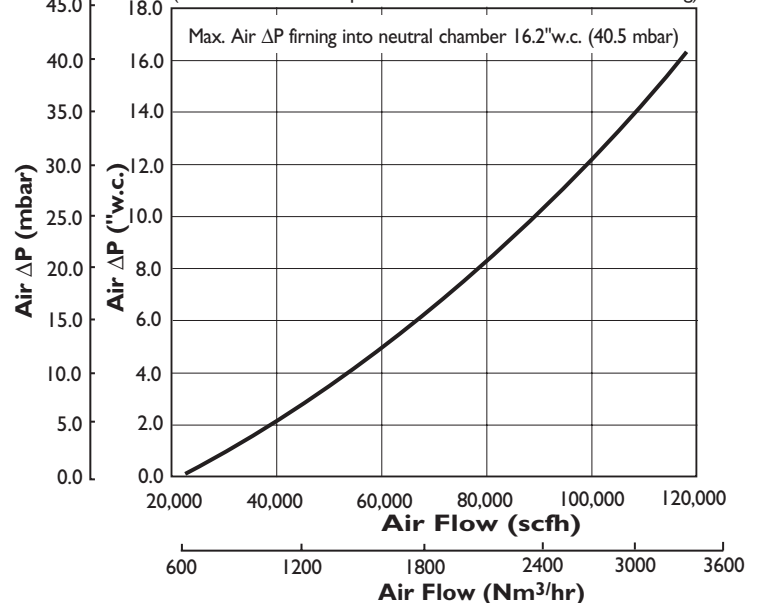
Fuel Orifice ΔP vs. Input

ΔP measured between taps B and D

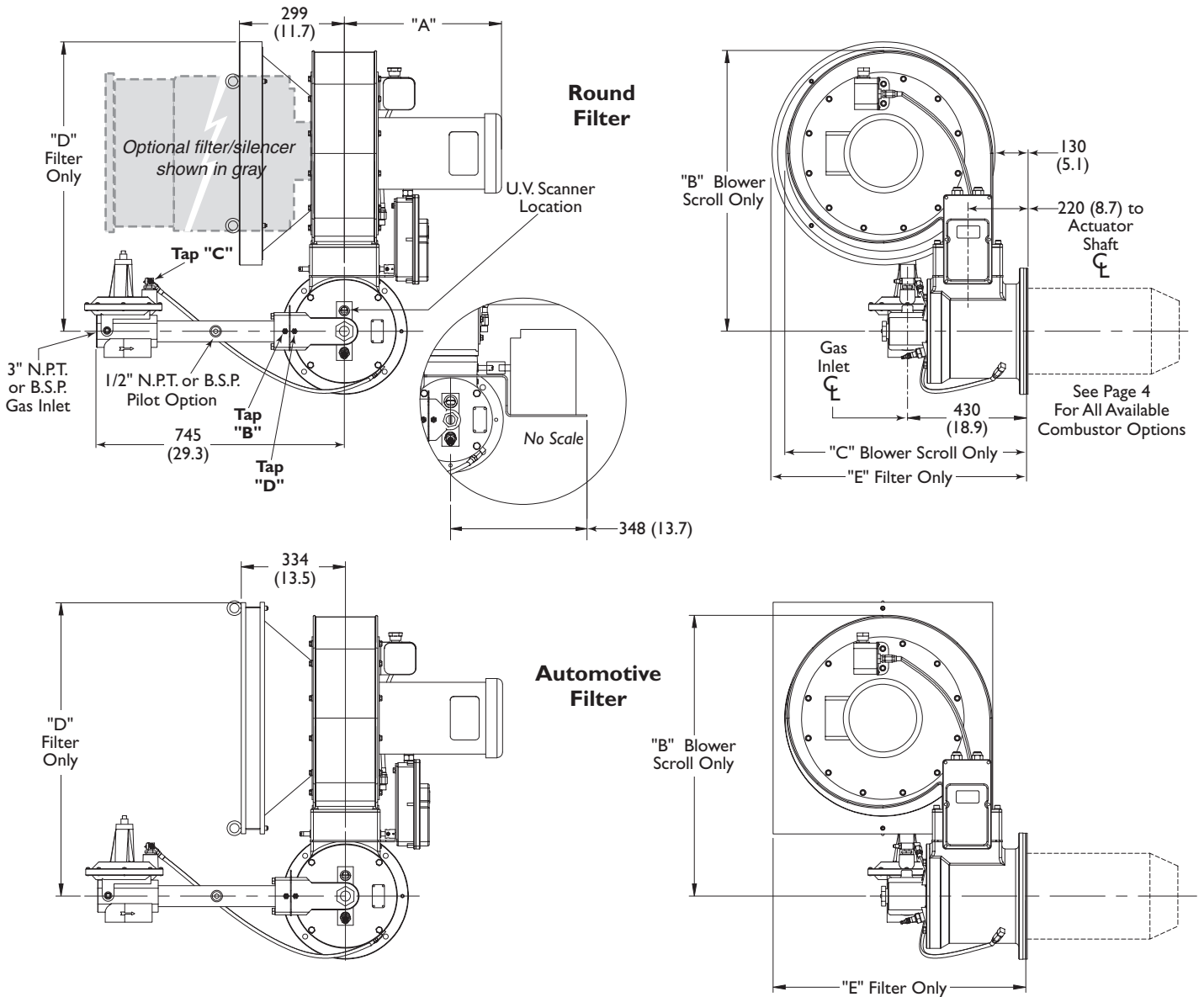


Air ΔP vs. Air Flow

(Measured between tap C and the chamber with the burner firing)

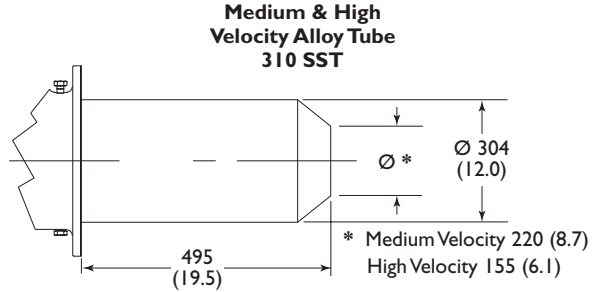
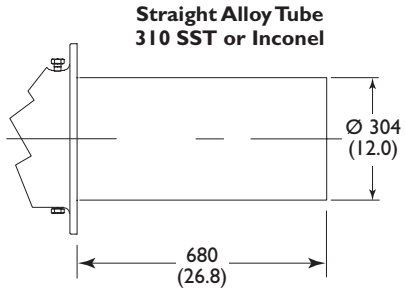


Dimensions mm (Inches)

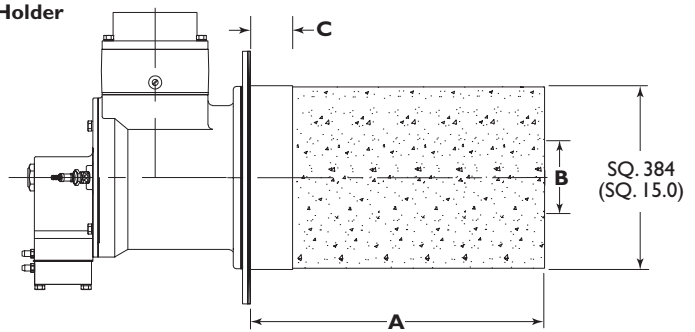
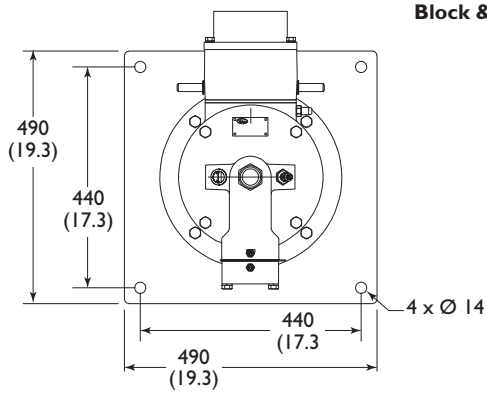
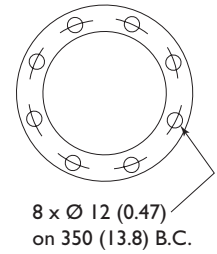


| | Combustor Type | Blower Model | Filter Type | Dimensions mm (inches) | | | | |
|--------------------|----------------------------|--------------|-------------|------------------------|------------|------------|------------|------------|
| | | | | A | B | C | D | E |
| 60Hz Blower | Straight | 7B | Round | 500 (19.7) | 896 (15.3) | 799 (31.5) | 929 (36.6) | 837 (33.0) |
| | Medium Velocity | 7B | Round | 500 (19.7) | 896 (15.3) | 799 (31.5) | 929 (36.6) | 837 (33.0) |
| | Straight | 7B | Automotive | 500 (19.7) | 896 (15.3) | 799 (31.5) | 896 (35.3) | 902 (35.5) |
| | Medium Velocity | 7B | Automotive | 500 (19.7) | 896 (15.3) | 799 (31.5) | 896 (35.3) | 902 (35.5) |
| 50Hz Blower | Straight & Medium Velocity | 7B | Round | 488 (19.2) | 984 (38.7) | 921 (36.3) | 945 (37.2) | 912 (35.9) |

Combustor Options

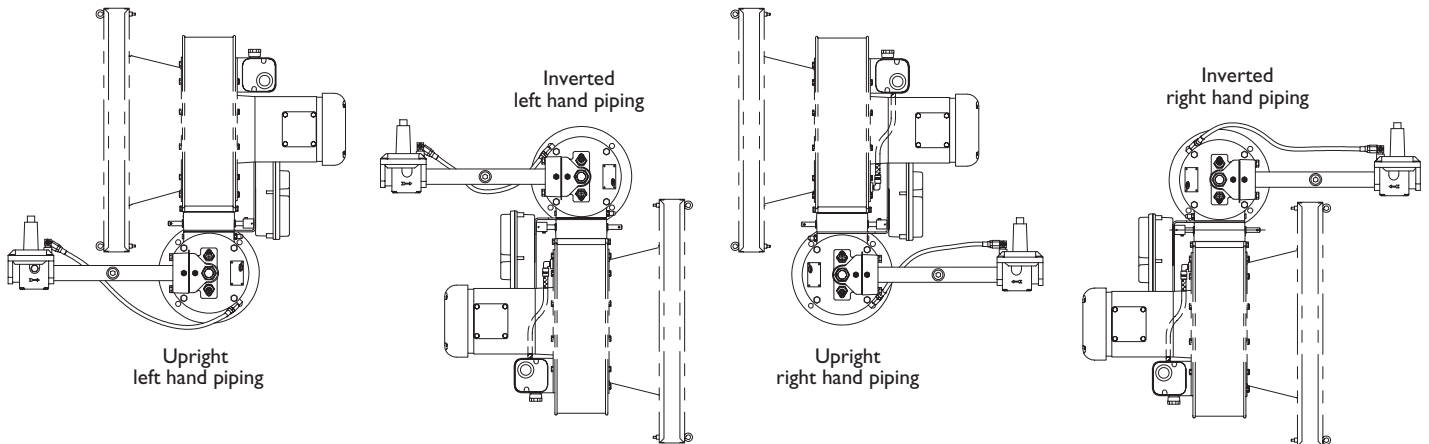


Mounting Pattern



| Block & Holder Option | Dimensions mm (Inches) | | |
|-----------------------|------------------------|------------|----------|
| | A | B | C |
| Straight | 494 (19.4) | 300 (11.8) | 50 (2.0) |
| Medium Velocity | 494 (19.4) | 250 (9.8) | 50 (2.0) |

Burner Configuration & Piping Arrangement





Offered By:

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