

ECLIPSE RATIOMATIC BURNERS

Data 110-1

Model 50 RM—Version 1.01

6/95

For Serial Numbers 95-5500 & Above

Specifications

Input vs. Chamber Pressure	700,000 Btu/hr. @ -5.0" w.c.	205 kW @ -12.5 mbar
	650,000 Btu/hr. @ -3.0" w.c.	191 kW @ -7.5 mbar
	550,000 Btu/hr. @ -1.0" w.c.	161 kW @ -2.5 mbar
	500,000 Btu/hr. @ 0.0" w.c.	147 kW @ 0.0 mbar
	450,000 Btu/hr. @ +1.0" w.c.	132 kW @ +2.5 mbar
	400,000 Btu/hr. @ +2.0" w.c.	117 kW @ +5.0 mbar

Input may be increased by 20% if sufficient secondary air is available to complete combustion.

Minimum Input 40,000 Btu/hr. (11.7 kW) with neutral chamber pressure. Will be slightly higher with negative chamber pressure.

Turndown 12:1 with neutral chamber pressure.

Configurations	Burner Configuration	Max. Chamber Temp.	Assy. No.
	Cast head & alloy tube	1500° F (816° C)	110212
	Alloy head & refractory block	1800° F (982° C)	110160-1

Maximums shown are for average installations. Depending on conditions, higher temperatures can be obtained. Contact Eclipse for details.

Fuel Standard nozzle burns natural gas, propane, propane/air mixes without changing internals. Contact Eclipse for other fuels.

Gas Inlet Pressure at proportionator inlet	Minimum: 7" w.c. (17 mbar)	natural gas, .65 s.g.
	Maximum: 1 psig (69 mbar)	natural gas, .65 s.g.

Pilot Gas Pressure at pilot cock inlet	Minimum: 6" w.c. (15 mbar)	natural gas, .65 s.g.
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High Fire Flame Length 24" (0.61 m)
Measured from the end of the firing tube, firing parallel to air flow with neutral chamber pressure. When firing perpendicular to air flow, flame length will be shorter. Contact your local Eclipse representative for details.

Piloting Integral spark-ignited pilot; ignition plug included.

Flame Monitoring Flame rod included; UV scanners & mounting kits available.

Control Motor Requirements 90° travel with full stroke timing of 15 seconds or longer. Ovens with high chamber drafts or backpressures may require less than a full 90° stroke. For these cases, use adjustable stroke motors or motors equipped with travel-limiting auxiliary switches. See Bulletin 720.

Emissions Ratiomatics produce low NO_x, CO and aldehydes. Emissions performance depends not only on the burner, but also other factors such as chamber temperature, chamber design, and heat loading. For estimates of Ratiomatic performance in your application, call Eclipse.

Packaging Options IRI or NFPA type valve trains, and UL recognized valve packages available.

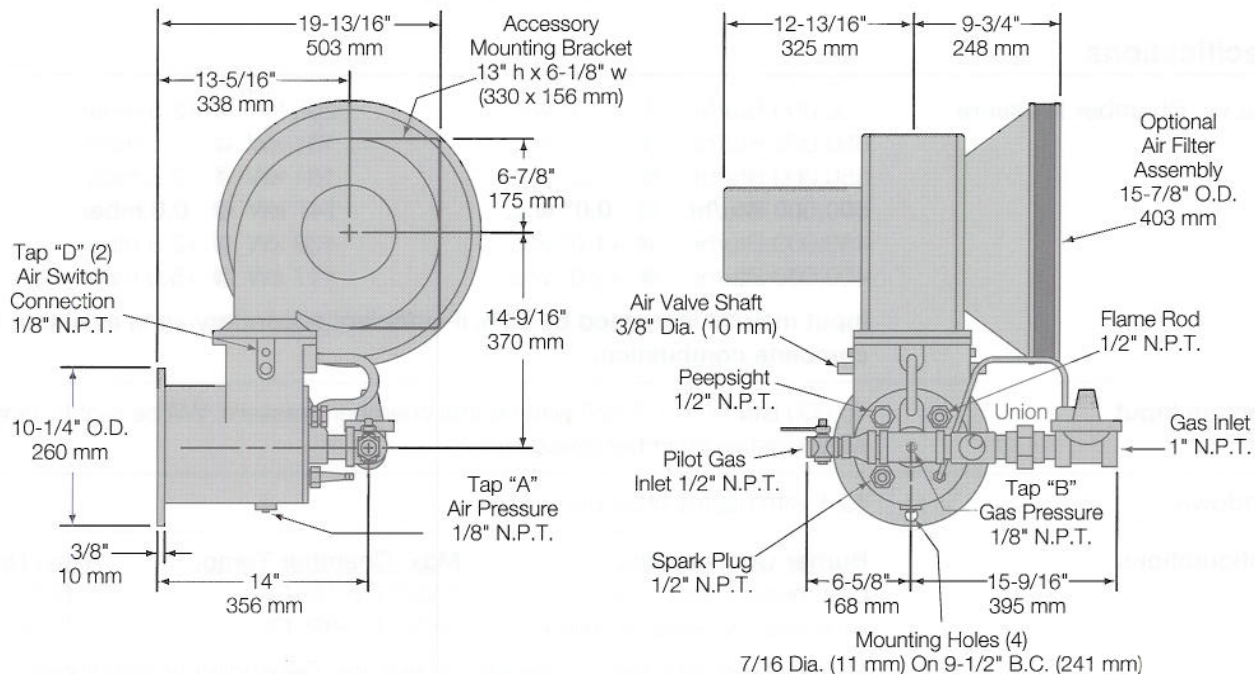
CAUTION: It is dangerous to use any fuel burning equipment unless it is equipped with suitable flame sensing devices and automatic fuel shut-off valves. Eclipse can supply such equipment or information on alternate sources.



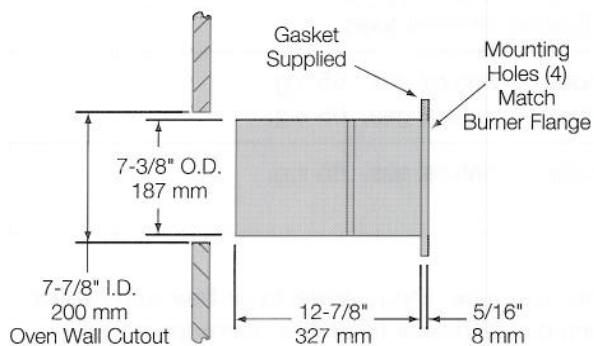
ECLIPSE COMBUSTION

Dimensions, 50 RM

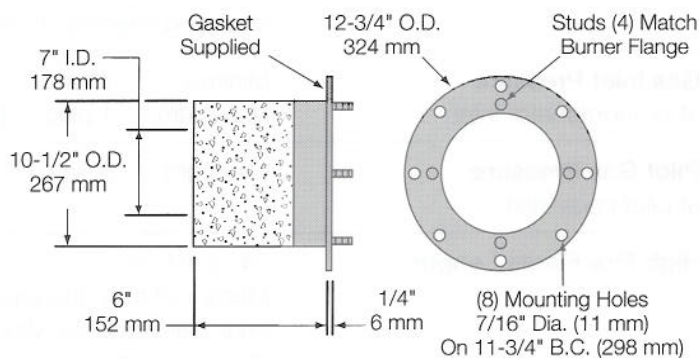
Dimensions are subject to change without notice. Contact Eclipse for certified prints prior to fabrication or installation.
Blower motor and air filter positions can be reversed in the field.



Alloy Tube Assembly



Block & Holder Assembly



Component Information

Item	Description	Part #
50 RM Burner Assembly	With Standard Head and Alloy Tube Assembly	110212
	With Alloy Head and Block & Holder Assembly	110160-1
Air Filter Assembly	Optional	110298
Replacement Filter Element	—	11132
Spark Plug & Flame Rod ¹	For burner with tube.	13581
	For burner with block.	13837
Alloy Tube Assembly ²	With two gaskets	110184
Block & Holder Assembly ²	—	187327-61
Blower Motor ¹	1/3 hp, 230/460/3/60 TEFC, 3600 RPM	12109
Proportionator ¹	Eclipse ES 366, 1"	15939
Pilot Cock ¹	Eclipse lever handle, 1/2"	10627
Gas Adjusting Butterfly ¹	Eclipse 104 BV, 1"	500988

¹ Included with burner assembly.

² Not interchangeable in the field. Contact Eclipse to convert from tube to block or vice versa.



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