2100 SERIES HTR® HOT AIR BURNER

CAPABILITIES

- High thermal release
- High temperature radiation without flame impingement
- Ability to place heat where required
- High turndown capacity
- Nominal capacity range 70,000 to 3.5 mm Btu/hr

FEATURES

- High temperature radiation through high speed combustion
- Extra rugged port block and mounting plate construction

CONTROL

- Pressure Balance Ratio Regulator
- Volumetric Air Ratio Control
- Tandem Valves

FLAME MONITORING

- Provisions for Flame Monitoring See 2100 Bulletin Page 3

BURNER IGNITION

- Pilot
- Direct Spark
- Manual

APPLICATIONS

- Reheat Furnaces
- Batch Anneal Furnaces
- Forging Furnaces
- Continuous Strip Heating Furnaces
- Drying Ovens
- Aluminum Melting Furnaces
- Galvanizing Furnaces
- Tube Upsetters
- Glass Bending and Melting
- Sinter Hoods
- Clay Calcining
- Many other Applications

FUEL CAPABILITIES

- Natural Gas
- Coke Gas
- LP Gas
- Low Btu Mixed Gas
- Distillate Fuel Oils
- #6 Fuel Oil

OPTIONS

- Mounting plate designs including lug type for roof mounting, square for sidewall mounting and curved for cylindrical furnace walls
- See bulletins for optional block lengths

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CAPACITY CHART

Air Flow at 20" water column (50 mBar)[1,2]

Catalog No. 2100-	Capacity Option	Air Flow at 800°F/427°C		[4]Direct Spark Ignitor Part No. (optional)	Pilot Part No.	LP Oil Burner Size 1920-	Atomizing Air Flow at 32 OSI (137 mBar) Static Press.		[3]Cooling Air Flow at 2 OSI (9 mBar) Static Press.	
		SCFH	Nm^3/hr				SCFH	Nm^3/hr	SCFH	Nm^3/hr
008	A	399	11	3500-210	3001-010	--	--	--	--	--
010	A	880	24	3500-210	3001-010	--	--	--	--	--
015	A	1,464	39	3500-210	3001-010	--	--	--	--	--
020	A	2,820	76	3500-210	3001-010	--	--	--	--	--
	B	3,488	94			--	--	--	--	--
025	A	4,510	121	3500-210	3001-030	--	--	--	--	--
	B	5,970	160			--	--	--	--	--
030	A	5,970	160	3500-210	3001-030	--	--	--	--	--
	B	7,190	193			--	--	--	--	--
	C	9,860	264			--	--	--	--	--
	D	11,660	313			--	--	--	--	--
040	A	11,200	300	3500-210	3001-030	008	1,200	32	300	8
	B	14,270	383			008	1,200	32	300	8
	C	15,310	410			008	1,200	32	300	8
	D	17,700	475			008	1,200	32	300	8
060	A	23,970	643	3500-210	3001-030	015	1,600	43	400	11
	B	27,210	729			015	1,600	43	400	11
	C	29,590	793			015	1,600	43	400	11
	D	32,580	873			015	1,600	43	400	11
	E	18,590	498			015	1,600	43	400	11

[1]Gas pressure is approximately 0.7 times air pressure.
[2]Piping system should be received to insure delivery of this pressure. On occasion, the approach to the burner should be increased one size including valves, flexible nipples, etc.
[3]Recommended when firing as with 1920 LP atomizer in place.
[4]Direct spark ignition for natural gas only. For dual fuel mode, burners must be ignited on natural gas and then switched over to light oil.

The 2100 Series burner is primarily designed for slightly oxidizing to slightly reducing air to fuel ratios and is not intended as an excess air burner. Careful consideration should be given to the turndown requirements so that the minimum air pressure requirement is approximately 0.3" W.C. All burners, except direct spark ignited models, have an integral machined gas distribution orifice, which eliminates the need for individual gas balancing or throttle valves. This gas distribution orifice insures burner distribution throughout a given zone. Each burner except the direct spark ignited model, has an integral machined gas distribution orifice which eliminates the need for individual gas balancing or throttle valves. The spark ignited model uses an orifice installed in the supply line. The gas distribution orifice insures burner distribution throughout a given zone.

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Mininum & Maximum Port Block Lengths for Flame Rod & U.V. Cell Applications

Burner Size	Min/Max Port Block Lengths		
		Square Plate	
	Lug Type Plate	Round Block	Square Block
2.5 & 3	9"/9"	9.25/10.25"	9.25"/10.25"
4"	9"/9"	9.25/10.25"	9.25"/10.25"
6"	9"/11.5"	9"/13.5"	9"/13.5"

2100 SERIES BURNERS

Catalog Model No.	
2110	Preheated Air, Roof Mount, Gas Only
2116	Preheated Air, Roof Mount, Gas and Light Oil
2120	Preheated Air, Wall Mount, Gas Only
2126	Preheated Air, Wall Mount, Gas and Light Oil

NOTE: GENERAL DIMENSION INFORMATION. SEE BLOOM REPRESENTATIVE FOR CERTIFIED DIMENSIONS FOR CONSTRUCTION.

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