

1.2 FURNACE SPECIFICATIONS

Table 1-1 lists the specifications for the MRA-5 Furnace

TABLE 1-1. MRA-5 FURNACE SPECIFICATIONS

<u>Parameter</u>	<u>Specification</u>
Maximum Temperature	1700°C
Nominal Operating Temperature	500-1600°C
Number Of Controlled Heat Zones	Two
Zones Heated By	Molybdenum Ribbon
Working Dimensions	305 mm (12") x 305 mm (12") x 305 mm (12")
Actual Chamber Diameter	533 mm (21")
Hearth Diameter	457 mm (18")
Chamber and Hearth Description	
Internal Surfaces	Alumina
Product Setter Plate Pedestal	Alumina
Interlocks	Provided with heat switch
Hearth and Chamber Seal	Separated by water-cooled silicon-rubber gasket
Sight Port	Water-cooled, purged with DA
Outer Shell	Water-cooled
Hearth Positioning	By motor-driven elevator
Exhaust System	Fitted with Ignitor Burn-Off Assembly
Temperature Control System	One Model 7351 DDC Two Model 300 SCR Input Controls Two Type "S" Thermocouples: (2) - Control (2) - Record and Overheat Two voltmeters, two ammeters and two trimming potentiometers

TABLE 1-1. MRA-5 FURNACE SPECIFICATIONS (Continued)

<u>Parameter</u>	<u>Specification</u>
Atmosphere Control System	One BTU Failsafe Low-Pressure Atmosphere Control System One flowmeter: Purge, N ₂ Four Mass flow controllers: (1) - Dry N ₂ (1) - Dry H ₂ (1) - To saturator for wet N ₂ (1) - To saturator for wet H ₂ One Model PSA 600 Saturator, temperature is controlled by Model 7351 DDC., gas functions controlled by Model 7351 DDC. One General Eastern Hygrometer Model 1200 APS
Electrical Specifications	
Heater Load	Approximately 40 KW
Operating Voltage	480 V, 60 Hz, 3-phase
Approximate Shipping Weight	1,818 KG (4,000 lbs.)