700 SERIES

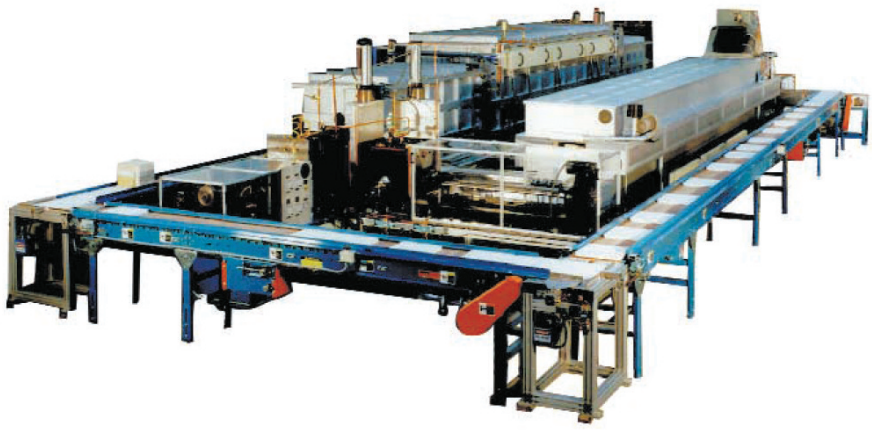
HIGH TEMPERATURE, AIR ATMOSPHERE, CONTINUOUS FURNACES TO 1700°C (3100°F)

The CM 700 Series furnaces are typically used for air atmosphere applications. However, they are also available for use in pure oxygen or inert atmospheres. The base model includes an external stoker, entrance section, high heat section, a cooling section, and cross feeds with return conveyor. Depending on application requirements other features are added such as preheat sections, binder removal sections, and multiple zone controls.

The furnaces are constructed of heavy gauge steel that is welded and reinforced. All power components and controls are located on the main frame assembly. A very efficient block graded brick insulation package is utilized with high purity alumina brick on the hot face. The hanging Kanthal molydisilicide heating elements are easy to replace through the roof section.

When automated the pusher plates (carrier trays) form a train and are pushed through the furnace by an external stoker device. All automation is located outside the heat envelope for ease of maintenance and long life.

Temperature control is by microprocessor based setpoint controllers operating in conjunction with phase angle-fire SCR power controllers and type "B" thermocouples. Independent overtemperature instrumentation is standard.



Model 71616-144-4Z Automated

USED FOR THESE AND OTHER APPLICATIONS:

- Ceramics
- Glass
- Phosphor
- Calcination
- Sintering
- Firing
- Co-Firing
- Annealing

SPECIFICATIONS

STANDARD SYSTEM INCLUDES:

- Total system packaged in common frame including power and control components
- Heavy Gauge Welded and Reinforced Steel Frame
- Kanthal Molydisilicide Heating Elements
- Block Graded Alumina Brick Insulation Package
- Water-Jacketed Cooling Section
- Microprocessor Based Set Point Temperature Controller
- Phase Angle-Fire SCR Power Controller
- Independent Overtemperature Instrumentation
- Type "B" Thermocouples
- External Stoker Assembly
- Cross Feeds and Return Conveyor

Model 7811-68-42
Rack & Pinion Stoker

OPTIONAL FEATURES INCLUDE:

- Preheat Sections
- Binder Removal Sections
- Multiple Zone Control
- Data Recording Equipment

TYPICAL SIZES (FOR REFERENCE ONLY, ADDITIONAL SIZES AVAILABLE)

MODEL NUMBER	TUNNEL OPENING H X W (in)	TUNNEL OPENING H X W (mm)	HEATED LENGTH (in)	HEATED LENGTH (mm)	NUMBER OF ZONES	MAXIMUM TEMPERATURE	ATMOSPHERES
744-36-1Z	4 x 4	101 x 101	36	914	1	1700°C (3100°F)	Air Oxygen Inert
766-48-1Z	6 x 6	152 x 152	48	1219	1	1700°C (3100°F)	Air Oxygen Inert*
766-60-3Z	8 x 8	203 x 203	60	1524	3	1700°C (3100°F)	Air Oxygen Inert*
71010-96-3Z	10 x 10	254 x 254	96	2438	3	1700°C (3100°F)	Air Oxygen Inert*
71212-120-4Z	12 x 12	305 x 305	120	3048	4	1700°C (3100°F)	Air Oxygen Inert*
71616-144-4Z	16 x 16	406 x 406	144	3658	4	1700°C (3100°F)	Air Oxygen Inert*
72020-180-6Z	20 x 20	508 x 508	180	4572	6	1700°C (3100°F)	Air Oxygen Inert*

*Notes: Inert atmospheres limit the maximum operating temperatures, typically by at least 100°C (212°F).

103 Dewey Street • Bloomfield, NJ 07003 • Tel: 973.338.6500 • Fax: 973.338.1625
www.cmfurnaces.com • email: info@cmfurnaces.com