

1200°C LARGE DIAMETER TUBE FURNACES

DESCRIPTION

Lindberg single- and three-zone tube furnaces are designed for use where exceptional radial and linear temperature uniformity, process repeatability, rapid heat-up and response are critical.

FEATURES

Single-Zone Models

- Unique double shell design
- Can be used with a variety of customer supplied ceramic, quartz or alloy process tubes, as well as cylindrical atmosphere retorts available from Lindberg
- Two semi-cylindrical heating units, one located in each furnace chamber-half, form a long split cylindrical heated chamber
- Graded thermal insulation
- Insulating vestibules at the ends of the heated chamber
- Long-life, fast response thermocouples attached to six feet of compensated thermocouple lead wire with a polarized plug

Three-Zone Models

- Three independent power circuits (zones) with independent thermocouples for control reference
- Adjustable profiling of end zones by independent controller
- General construction and physical appearance of the 3-zone furnace is similar to the single zone furnace of equivalent temperature range

Control Consoles

- Lindberg single- and three-zone temperature control consoles are designed to provide the versatility and control accuracy to meet the most critical process requirements. These systems incorporate advanced self-tuning instrumentation which automatically sets the best control parameter values during the furnace operation. A selectable ramp-to-setpoint feature allows controlled heat-up to setpoint temperature. Two digital displays simultaneously indicate setpoint and process temperatures in °C or °F. Control consoles include solid state power module(s), one-off circuit breaker and one thermocouple input jack per zone.



Model 54854

APPLICATIONS

- Annealing
- Ashing
- Carbon firing
- Ceramic firing
- Drying
- Hardening
- Sintering
- Solution treating
- Stress relieving
- Normalizing

BENEFITS

Single-Zone Models

- Provides for low outer shell temperature
- Full length hinge and a positive latch permit easy observation, fast cooling, convenient placement of the tube and overall ease of operation
- Outstanding radial and linear temperature uniformity
- Chamber temperature uniformity is also improved
- Enhanced uniformity and reduces heat loss

Three-Zone Models

- Uniform center zone temperature profile
- Produces a pronounced controlled gradient



Bringing you over 90 years of innovative furnace design

SPECIFICATIONS

1200°C Large Dia Tube Furnace--Single Zone					
Model	Interior Dimensions WxF-BxH in. (cm)	Exterior Dimensions WxF-BxH in. (cm)	Watts	Control Console	Shipping Weight lbs. (kg)
54852	7x24 (17x61)	22x20x37.5 (55.9x50.8x95.3)	9,000	58124	380 (172)
54872	7x36 (17x91.4)	22x20x49.5 (55.9x50.8x125.7)	12,800	58124	510 (231)
54952	9x24 (22.9x61)	26x27x37.5 (55.9x68.6x95.3)	14,000	58124	520 (236)
54972	9x36 (22.9x91.4)	26x27x49.5 (55.9x68.6x125.7)	21,000	58174	700 (318)
1200°C Large Dia Tube Furnace--Three Zone					
54857	7x24 (17x61)	22x20x37.5 (55.9x50.8x95.3)	10,000	58434	380 (172)
54877	7x36 (17x91.4)	22x20x49.5 (55.9x50.8x125.7)	14,280	58434	510 (231)
54957	9x24 (22.9x61)	26x27x37.5 (55.9x68.6x95.3)	16,000	58474	520 (236)
54977	9x36 (22.9x91.4)	26x27x49.5 (55.9x68.6x125.7)	22,800	58474	700 (318)

Note: Power cord and hard wiring supplied by customer.

All furnaces 208/240 Volt, single phase, 50/60 Hz.

Model	58124	58174	58434	58474
Preset TC Input	Platinel II	Platinel II	Platinel II	Platinel II
Preset Control Range	0-1200 C	1-1200 C	0-1200 C	0-1200 C
Maximum Amp Load	60	120	20-30-20	30-60-30
Voltage	208/240	208/240	208/240	208/240
Zones	1	1	3	3
Hertz	50/60	50/60	50/60	50/60
Overall Size (HxWxD in inches)	10 x 14 x 19	17 x 17 x 21	17 x 14 x 19	17 x 17 x 21
Shipping Weight (lbs.)	30	50	60	70

OPTIONS

- Computer communications port
- Software
- Inert and combustible atmosphere admission systems
- Retorts
- All standard 1200°C single- and three-zone tube furnace models are designed for horizontal operation. Furnaces specifically designed for vertical mounting are available on special order.
- Option P Programmable Controller
This controller offers the convenient flexibility of ramping to multiple setpoint levels and holding these levels for variable periods of time. The temperature controller provides 16 programmable segments consisting of ramps (up or down) or dwells (timed holds).
- Option P4
This controller offers the convenient flexibility of ramping to multiple setpoint levels and holding these levels for variable periods of time.
- The temperature controller provides four 16 programmable segments consisting of ramps (up or down) or dwells (timed holds).
- Option B Overtemperature Control (OTC)
This option provides positive protection of both furnace and load in the event of primary control circuit failure. Completely redundant circuit includes separate analog setting instrument with manual reset pushbutton, magnetic contactor and independent thermocouple.
- Digital communication kits
These kits allow modification and interrogation of all instrument control and configuration parameters from a remote computer. Kits are available to interface with RS-2323 or RS-422/485 communications ports.
- Retorts
Single-end and double-end cylindrical retorts are available for use with all 1200°C tube furnaces when atmosphere processing is required. (Maximum retort temperature 1050°C.)

Lindberg manufactures a full line of industrial heating equipment for some of the most rigorous and exacting applications known. We also put our process-proven experience and knowledge to work in developing heating systems to meet your specialized requirements. Contact your nearest Lindberg sales office and tell us your needs—we will provide a way to meet them.

All specifications are subject to change without notice. All dimensions are approximate.

LINDBERG

304 Hart Street, Watertown, WI 53094
 Phone: 920.261.7000 or 800.873.4468 Fax: 920.262.3995
In Canada: 7625 Kimbel Street, Unit 20 A
 Mississauga, Ontario L5S 1A9
 Phone: 905.671.0544 Fax: 905.671.3229
www.heat-treat.com