



(Top) Model STF54434C 1700°C Tube Furnace shown with controller CC59256PCOMC.  
(Process tube shown, not included).

## Applications

- Atmosphere Processing
- Sintering
- Annealing
- Crystal Growing
- Heat Treating

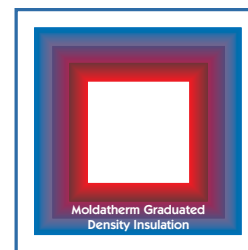
## 1700°C High Temperature Tube Furnaces (Independent Control)

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High temperature tube furnaces achieve excellent temperature uniformity at 1700°C with rapid heat-up, recovery and cool-down. Moldatherm® graduated density insulation adds to safety and performance by forming enhanced insulation protection between the high temperature chamber and exterior cabinet surface. Moldatherm graduated density insulation, combined with molybdenum disilicide heating elements, provide superior radial and linear temperature uniformity with resistance to thermal shock. The independent digital temperature control (ordered separately) has multiple programmable segments useful for a wide range of applications.

### Features

- Heating elements with unique right angle bend and sidewall mounting deliver exceptional energy release, fast heat-up and recovery, reduced thermal process cycle time, and cost savings through quicker throughput and energy efficiency
- Heating elements tolerate rapid cycling over extended periods; elements are easily replaceable without the need to match resistance values
- Heating elements are sidewall mounted to protect integrity of chamber roof; roof penetrations are avoided
- Type "B" thermocouples assure accurate temperature measurement and long thermocouple life; 10' compensated lead wire with polarized plug included
- Moldatherm end vestibules accept 3" O.D. process tube (customer supplied)
- Optional Moldatherm vestibules permit operation with 1", 2" and 3" O.D. process tubes for increased versatility
- Double shell construction and convection cooling design reduces exterior surface temperature
- Removable louvered panels provide easier access to heating elements and thermocouple



*Moldatherm graduated density insulation adds to safety and performance by forming enhanced insulation protection between the high temperature chamber and exterior cabinet surface.*

### 1700°C High Temperature Tube Furnace, Temperature Range 500°C to 1700°C

Furnace Model No.	Electrical Volts, Hz, 1Ø	Watts	Independent Controller	Exterior Dimensions H x F-B x W in" (mm)	Process Tube Diameter, in" (mm)	Heated Length in" (mm)	Ship Weight lbs (kg)
STF54434C	208/240V, 50/60 Hz	5000	CC59256PCOMC	19" (482.6) x 16" (406.4) x 22" (558.8)	3" (76.2)	12" (304.8)	95 (43)
STF54454C	208/240V, 50/60 Hz	10000	CC59256PCOM2CKT	19" (482.6) x 16" (406.4) x 34" (863.6)	3" (76.2)	24" (609.6)	165 (75)

**Process Tubes** These furnaces are designed for use with a variety of process tubes including alumina, mullite, quartz and metallic. For information on process tubes contact your process tube supplier or call your Lindberg/Blue M sales representative.

**Vestibule Set** One 3" vestibule set and sleeves included; other size vestibule sets and sleeves may be ordered separately.

## 1700°C Controller, Programmable, With Communications

Lindberg/Blue M 1700°C Programmable Controllers provide multiple programs and multiple segments for ramp (up and down) and dwell (timed hold) temperature control. The controller visually displays ramp rate, dwell time, program segment and percent power output. A holdback feature allows the operator to set a “process vs setpoint” temperature value which, when exceeded, holds the program to allow the process to catch up. Please see page 35 for additional information.

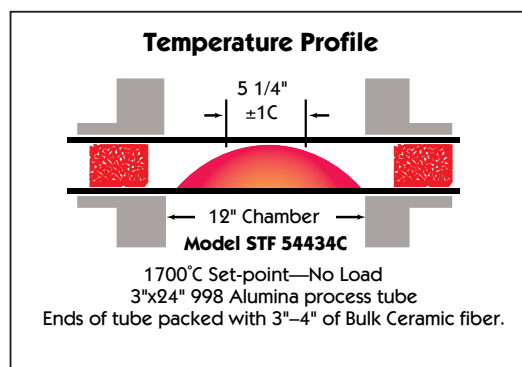
The controller includes a selectable self-tuning feature which sets the best PID settings for the thermal process. Two digital displays simultaneously indicate actual temperature and

setpoint temperature. High limit overtemperature protection is standard. The control console includes a circuit breaker, power module, transformer and cooling fans.

Controllers include RS485 data port (communications card and port) for connection to remote computer, allowing modification, interrogation and data transfer of all instrument control and configuration parameter. Up to 30 units can be connected to one PC. Software is not included, but is available as an option. Please see page 35 for additional options and information.

## Option B Overtemperature Control (OTC)

Adjustable digital overtemperature control, factory installed on selected control consoles with “B” suffix designation; see chart. Protects furnace and load in the event of primary control circuit failure. Overrides main controller and shuts off power to furnace if high limit is reached. Manual re-set required for safety. Operates via magnetic contacts through signal from independent thermocouple.



*Uniformity Profile, Model STF54434C,  
1700°C, No Load.*



*Programmable Controller, 1700°C  
Model CC59256PCOMC.*

## 1700° Controller, Programmable, with Communications

Controller Model No.	Digital	With Programmer	With Overtemp Control	Electrical Volts, Hz	Exterior Dimensions H x F-B x W in" (mm)	Ship Weight lbs (kg)
CC59256PCOMC	■	■		208/240V, 50/60Hz	10" (254) x 15" (381) x 21" (533.4)	130 (59)
CC59256PBCOMC	■	■	■	208/240V, 50/60Hz	10" (254) x 15" (381) x 21" (533.4)	130 (59)
CC59256PCOM2CKTC	■	■		208/240V, 50/60Hz	30" (762) x 15" (381) x 22" (558.8)	230 (105)
CC59256PBCOM2CKTC	■	■	■	208/240V, 50/60Hz	30" (762) x 15" (381) x 22" (558.8)	230 (105)

**Note:** Required power cord, hardwiring and interconnecting wiring are not included.

## Vestibules

Optional Moldatherm® vestibules permit operation with 1", 2" and 3" O.D. process tubes for increased versatility. Two vestibules are required for each furnace. One 3" vestibule set is included and installed with each furnace.

## Moldatherm Sleeves

Tube sleeves may be placed over customer supplied process tubes to reduce thermal shock to the process tube. Sleeves must be ordered separately. All tube sleeves are 3" long.

Furnace Model Number	Vestibule Catalog No. (Ordered Separately)		
	1" dia.	2" dia.	3" dia.
STF54434C	7219-2147-001	7219-2147-002	7219-2147-003*
STF54454C	7219-2147-013	7219-2147-012	7219-2147-011*

\* One set of (2) included with furnace

Furnace Model Number	Sleeve Catalog No. (Ordered Separately)		
	1" dia.	2" dia.	3" dia.
STF54434C	7219-2134-001	7219-2134-002	7219-2134-003*
STF54454C	7219-2134-013	7219-2134-012	7219-2134-011*

\* One set of (2) included with furnace

Actual performance may vary depending on load, chamber size, sample placement, ambient temperature and environmental conditions.