

**LABTRON**



# Tube Furnace LTF-C2 Series

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## Tube Furnace LTF-C20

Tube Furnace LTF-C20 is a standard design of tube furnace comprised with 510 mm tube length, 50 mm diameter and 300 mm heat zone with 1300°C continuous working temperature. Features software based PID control with 4 lines LCD display, offers 4 steps heating program and 2 preset programs with 1 to 20°C/min of thermal rate. Designed ergonomically with dual shell housing, K-type thermocouple and thermal shock resisting tube, it can withstand extreme and rapid changes in temperature. With durable inside lining of light insulating bricks, this tube furnace is with gas inlet and evacuation system option for protective atmosphere, makes it an ideal unit for homogeneous temperature distribution and reliable protective atmosphere.

## Tube Furnace LTF-C21

Tube Furnace LTF-C21 is an extended design of tube furnace comprised with 510 mm tube length, 50 mm diameter and 300 mm heat zone with 1300°C continuous working temperature. Features software based PID control with 4 lines LCD display, offers 8 steps heating program and 4 preset programs with 1 to 20°C/min of thermal rate. Designed ergonomically with dual shell housing, K-type thermocouple and thermal shock resisting tube, it can withstand extreme and rapid changes in temperature. With durable inside lining of light insulating bricks, this tube furnace is with gas inlet and evacuation system option for protective atmosphere, makes it an ideal unit for homogeneous temperature distribution and reliable protective atmosphere.

## Tube Furnace LTF-C22

Tube Furnace LTF-C22 is an ultimate design of tube furnace comprised with 510 mm tube length, 50 mm diameter and 300 mm heat zone with 1300°C continuous working temperature. Features software based PID control with 4 lines LCD display, offers 16 steps heating program and 6 preset programs with 1 to 20°C/min of thermal rate. Designed ergonomically with dual shell housing, K-type thermocouple and thermal shock resisting tube, it can withstand extreme and rapid changes in temperature. With durable inside lining of light insulating bricks, this tube furnace is with gas inlet and evacuation system option for protective atmosphere, makes it an ideal unit for homogeneous temperature distribution and reliable protective atmosphere.

### Tube Furnace LTF-C23

Tube Furnace LTF-C23 is a scientific design of tube furnace comprised with 510 mm tube length, 50 mm diameter and 300 mm heat zone with 1300°C continuous working temperature. Features software based PID control with 4 lines LCD display, offers 32 steps heating program and 5 preset programs with 1 to 20°C/min of thermal rate. Designed ergonomically with dual shell housing, K-type thermocouple and thermal shock resisting tube, it can withstand extreme and rapid changes in temperature. With durable inside lining of light insulating bricks, this tube furnace is with gas inlet and evacuation system option for protective atmosphere, makes it an ideal unit for homogeneous temperature distribution and reliable protective atmosphere.

### Tube Furnace LTF-C24

Tube Furnace LTF-C24 is a standard design of tube furnace comprised with 660 mm tube length, 50 mm diameter and 450 mm heat zone with 1300°C continuous working temperature. Features software based PID control with 4 lines LCD display, offers 4 steps heating program and 2 preset programs with 1 to 20°C/min of thermal rate. Designed ergonomically with dual shell housing, K-type thermocouple and thermal shock resisting tube, it can withstand extreme and rapid changes in temperature. With durable inside lining of light insulating bricks, this tube furnace is with gas inlet and evacuation system option for protective atmosphere, makes it an ideal unit for homogeneous temperature distribution and reliable protective atmosphere.

### Tube Furnace LTF-C25

Tube Furnace LTF-C25 is an extended design of tube furnace comprised with 660 mm tube length, 50 mm diameter and 450 mm heat zone with 1300°C continuous working temperature. Features software based PID control with 4 lines LCD display, offers 8 steps heating program and 4 preset programs with 1 to 20°C/min of thermal rate. Designed ergonomically with dual shell housing, K-type thermocouple and thermal shock resisting tube, it can withstand extreme and rapid changes in temperature. With durable inside lining of light insulating bricks, this tube furnace is with gas inlet and evacuation system option for protective atmosphere, makes it an ideal unit for homogeneous temperature distribution and reliable protective atmosphere.

## Tube Furnace LTF-C26

Tube Furnace LTF-C26 is an ultimate design of tube furnace comprised with 660 mm tube length, 50 mm diameter and 450 mm heat zone with 1300°C continuous working temperature. Features software based PID control with 4 lines LCD display, offers 16 steps heating program and 6 preset programs with 1 to 20°C/min of thermal rate. Designed ergonomically with dual shell housing, K-type thermocouple and thermal shock resisting tube, it can withstand extreme and rapid changes in temperature. With durable inside lining of light insulating bricks, this tube furnace is with gas inlet and evacuation system option for protective atmosphere, makes it an ideal unit for homogeneous temperature distribution and reliable protective atmosphere.

## Tube Furnace LTF-C27

Tube Furnace LTF-C27 is a scientific design of tube furnace comprised with 660 mm tube length, 50 mm diameter and 450 mm heat zone with 1300°C continuous working temperature. Features software based PID control with 4 lines LCD display, offers 32 steps heating program and 5 preset programs with 1 to 20°C/min of thermal rate. Designed ergonomically with dual shell housing, K-type thermocouple and thermal shock resisting tube, it can withstand extreme and rapid changes in temperature. With durable inside lining of light insulating bricks, this tube furnace is with gas inlet and evacuation system option for protective atmosphere, makes it an ideal unit for homogeneous temperature distribution and reliable protective atmosphere.

## Features

- ❑ Different designs of tube furnace with 510 mm tube length, 50 mm diameter and 300 mm heat zone (LTF-C20 to LTF-C23)
- ❑ Different designs of tube furnace with 660 mm tube length, 50 mm diameter and 450 mm heat zone (LTF-C24 to LTF-C27)
- ❑ 1300°C continuous working temperature with 1 to 20°C/min of thermal rate
- ❑ Steps heating programs with custom preset programs
- ❑ Software based PID control with 4 lines LCD display, offers high precise control
- ❑ Designed ergonomically with dual shell housing, offers low external surface temperature
- ❑ K-type thermocouple and thermal shock resisting tube, offers accurate measurement

- Durable inside lining of light insulating bricks, can withstand extreme and rapid changes in temperature
- Gas inlet and evacuation system option for protective atmosphere
- An ideal unit for homogeneous temperature distribution and reliable protective atmosphere

## Application

Tube furnace is used for purification, coating, drying, hardening or ageing of samples, for annealing, brazing, calcination, degassing, sintering, soldering, sublimation, synthesis, and tempering, thermocouple calibration, in the testing of fuel cells, or in catalyst research.

## Specifications (LTF-C20 to LTF-C23)

| Model                     | LTF-C20                               | LTF-C21  | LTF-C22  | LTF-C23    |
|---------------------------|---------------------------------------|----------|----------|------------|
| Type                      | Standard                              | Extended | Ultimate | Scientific |
| Program memories          | 2                                     | 4        | 6        | 5          |
| Heating program           | 4 steps                               | 8 steps  | 16 steps | 32 steps   |
| Working temperature       | 1300°C                                |          |          |            |
| Tube length               | 510 mm                                |          |          |            |
| Tube diameter             | 50 mm                                 |          |          |            |
| Heated zone               | 300 mm                                |          |          |            |
| Thermal rate              | 1 to 20°C/min                         |          |          |            |
| Homogeneous Hot Zone      | 100 mm at ±10°C                       |          |          |            |
| Thermocouple              | K-type                                |          |          |            |
| Heating element           | Fe-Cr-Al                              |          |          |            |
| Inner insulation material | Ceramic-fibre blanket                 |          |          |            |
| Housing                   | Steel sheet with epoxy powder coating |          |          |            |
| Display                   | 4 lines                               |          |          |            |
| Maximum current           | 7 A                                   |          |          |            |
| Power                     | 1350 W                                |          |          |            |
| Dimension (W×D×H)         | 484×384×476 mm                        |          |          |            |
| Net weight                | 23 kg                                 |          |          |            |

|                             |                |
|-----------------------------|----------------|
| Packaging dimension (WxDxH) | 525x430x635 mm |
| Gross weight                | 30 kg          |

### Specifications (LTF-C24 to LTF-C27)

| Model                       | LTF-C24                               | LTF-C25  | LTF-C26  | LTF-C27    |
|-----------------------------|---------------------------------------|----------|----------|------------|
| Type                        | Standard                              | Extended | Ultimate | Scientific |
| Program memories            | 2                                     | 4        | 6        | 5          |
| Heating program             | 4 steps                               | 8 steps  | 16 steps | 32 steps   |
| Working temperature         | 1300°C                                |          |          |            |
| Tube length                 | 660 mm                                |          |          |            |
| Tube diameter               | 50 mm                                 |          |          |            |
| Heated zone                 | 450 mm                                |          |          |            |
| Thermal rate                | 1 to 20°C/min                         |          |          |            |
| Homogeneous Hot Zone        | 150 mm at ±10°C                       |          |          |            |
| Thermocouple                | K-type                                |          |          |            |
| Heating element             | Fe-Cr-Al                              |          |          |            |
| Inner insulation material   | Ceramic-fibre blanket                 |          |          |            |
| Housing                     | Steel sheet with epoxy powder coating |          |          |            |
| Display                     | 4 lines                               |          |          |            |
| Maximum current             | 7 A                                   |          |          |            |
| Power                       | 1500 W                                |          |          |            |
| Dimension (WxDxH)           | 634x384x476 mm                        |          |          |            |
| Net weight                  | 29 kg                                 |          |          |            |
| Packaging dimension (WxDxH) | 675x430x635 mm                        |          |          |            |
| Gross weight                | 37 kg                                 |          |          |            |