

General Description:

- Continuous Belt Transport Furnace
- 60" IR Heat Chamber, up to 1000C
- 6 Separately Controlled Heat Zones
- 30" Cooling Chamber
- Controlled CDA Process Atmosphere with Powered Burnout Exhaust
- Reliable PLC Control System
- Windows PC-based User Interface with LCD Monitor and RAID backup
- Production Line Options



TF-1214 with 120 inch long furnace chambers.

The TF-609 and -614 are specifically engineered for hybrid microcircuit, thick film and chip component processes involving firing of:

Dielectrics
Conductors
Resistors
Component terminations

In air (basic furnace with CDA)
Or in a nitrogen atmosphere with the Hermetic Chambers (HC) option

Inside, **process atmosphere** is controlled much like a clean room: pressurized gas is pushed through the heating chamber insulation providing a pre-heated, laminar flow for a uniform, stable atmosphere. **Precise temperature** is maintained in each zone by control thermocouples above the belt quickly sensing changing conditions. **IR quartz heating lamps** inside the chamber instantaneously adjust their output to achieve tight temperature control: each load through the furnace sees the same temperature.

Thermal Processing

TF-609 and -614 furnaces feature 60 in/76 cm of IR heating in 6 independently controlled heat zones, followed by a 30 in/76 cm cooling chamber, arranged as:

- | | |
|---|---------------|
| • Load Station | 15 in / 38 cm |
| • Entrance Isolation Baffle + Powered Exhaust | 15 in / 38 cm |
| • IR Heat Chamber 1 , with 3 x 10 in/25 cm control zones | 30 in / 76 cm |
| • Powered Intermediate Burnout Exhaust | |
| • IR Heat Chamber 2 , with 3 x 10 in/25 cm control zones | 30 in / 76 cm |
| • Transition Isolation Baffle + Powered Exhaust | 15 in / 38 cm |
| • Closed Atmosphere Cooling Chamber | 30 in / 76 cm |
| • Exit Isolation Baffle | 15 in / 38 cm |
| • Unload Station | 15 in / 38 cm |

TF-609 & -614 Hybrid/Thick Film Firing Furnaces

Adjustable Gas Flow Controls:

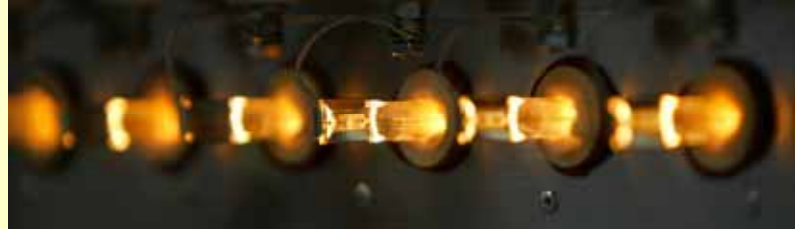
- Entrance Baffle
- Entrance Exhaust
- IR Zones 1-3
- Burnout Exhaust
- IR Zones 4-6
- Transition Baffle
- Transition Exhaust
- Cooling Tunnel & Exit Baffle

Belt Transport:

- Speeds: 1-10 ipm*
2.5-25 cm/m
*other available
- TF-609 width: 9 in/23 cm
- TF-614 width: 14 in/36 cm

Heat Sources:

48 near-wave IR quartz halogen lamps, above & below the belt, SCR controlled



Facility Requirements	Typical Power Required <table style="display: inline-table; border: none;"> <tr> <td></td> <td style="text-align: center;">TF-609</td> <td style="text-align: center;">TF-614</td> </tr> <tr> <td>208 or 240Vac, 60 Hz:</td> <td style="text-align: center;">13 kW, 31 A</td> <td style="text-align: center;">20 kW, 47 A</td> </tr> <tr> <td>380 or 400 Vac, 50 Hz:</td> <td style="text-align: center;">14 kW, 21 A</td> <td style="text-align: center;">15 kW, 22 A</td> </tr> </table>		TF-609	TF-614	208 or 240Vac, 60 Hz:	13 kW, 31 A	20 kW, 47 A	380 or 400 Vac, 50 Hz:	14 kW, 21 A	15 kW, 22 A
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208 or 240Vac, 60 Hz:	13 kW, 31 A	20 kW, 47 A								
380 or 400 Vac, 50 Hz:	14 kW, 21 A	15 kW, 22 A								
	CDA or N₂ Process Gas Required Gas Purge Rate/Min: 2.0 Gas Supply: 10 SCFM @ 70 PSIG									
	Facility Exhaust Required Heat Chamber Exhaust: 10 SCFM, 150°C Cabinet Exhaust (Room Air): 1500 SCFM, <40°C									
	Operating Size and Weight Length: 168 in / 4.27 m Width: 37 in / 0.94 m Height: 67 in / 1.71 m Adjustable Conveyor Height: 34-37.5 in / 87.6-95.2 cm (above floor) Weights: TF-609, 2150 LB/980 kg; TF-614, 2350 LB/1070 kg									
OPTIONS	Hermetic Chambers Element Monitors for Lamps Circuit Breaker Disconnect									
	O ₂ Gas and Moisture Analyzers Gas Pressure Regulator & Filter Production Line Options									

ABOUT US. In 2006 GreenBridge Technology (formerly known as Radiant Technology Corporation), the original manufacturer of your RTC brand continuous belt IR furnace equipment, spun off its remaining furnace business to FurnacePros, a division of Lochaber Cornwall, Inc.

EXPERIENCE! Comprised of former GBT / RTC employees, FurnacePros staff are experienced in the manufacture and service of equipment and software formerly supplied by GreenBridge Technology and RTC, Inc. including continuous belt near infrared furnaces, ovens and dryers for 80°C to 1000°C uninterrupted production service. We provide service, control system upgrades, warranty support and spares for all models of RTC brand equipment purchased from FurnacePros, GreenBridge Technology, Inc or Radiant Technology Corporation. As FurnacePros, we continue our emphasis on linking technology with the environment and offer a renewed focus on service and support for your continuous belt furnaces.



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