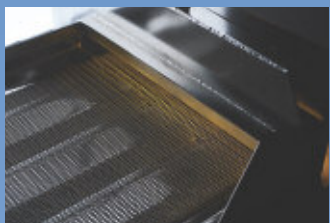




The Global Leader in Thermal Technology

Controlled Atmosphere Furnace

Built for Today. Ready for Tomorrow.



The Controlled Atmosphere Furnace from BTU features precise atmosphere controls to monitor critical parameters within the process chamber. The gas control panel is designed to operate in a safe/ failsafe manner while minimizing operator intervention.

Standard Features

- 1180°C maximum temperature rating
- Air/Nitrogen/Hydrogen capable
- FEC (fully enclosed coil) heaters formed into ceramic insulation panels
- Water cooling
- Gas tight muffle
- Cross belt temperature of $\pm 2^{\circ}\text{C}$ for belt widths up to 36 inches
- Independent overtemperature control in each zone
- WINCON™ Multi-Language Control Software
- Closed loop belt speed control
- Atmosphere safety NFPA 86C compliant

Options

- Heat/gas barriers to isolate gases
- Eductors for heating or cooling
- Venturi controlled exhaust stacks
- Atmosphere analyzer and sample systems
- Gas saturators for dew point control
- $\pm 1^{\circ}\text{C}$ across belt uniformity (pre-test qualification)
- Water cooling control and alarms
- Belt cleaners
- UPS

Designed for today's most demanding materials applications, BTU's muffle furnaces meet the processing needs of glass to metal sealing, stainless steel brazing as well as many other processes requiring tight atmosphere and temperature control. The Controlled Atmosphere Furnace delivers superior performance in diverse atmospheres including air, nitrogen, hydrogen and forming gas. Unique features, including venturi exhaust and patented eductor technology, make the essential furnace for advanced materials processing.



- **Brazing**
- **Glass to metal seal**
- **Power metals sintering**
- **Microelectronics packaging**

Standard Configuration*	Electronic Brazing TCA 6 inch	Glass to Metal Seal TCA 14 inch
Atmosphere	Nitrogen or Hydrogen	Nitrogen or Hydrogen
Atmosphere purity**	2ppm O ₂ and moisture	2ppm O ₂ and moisture
Conveyor width	6 in (15cm)	14 in (36cm)
Heated length	72 in (183cm)	120 in (305cm)
Heated zones	6	10
Conveyor speed	1-6 ipm	1-6 ipm
Cooling length	60 in (152cm)	84 in (213cm)
Overall system height	60 in (152cm)	60 in (152cm)
Overall system width	36 in (91.4cm)	48 in (122cm)
Overall system length	23 in (701cm)	30.5 ft (930cm)

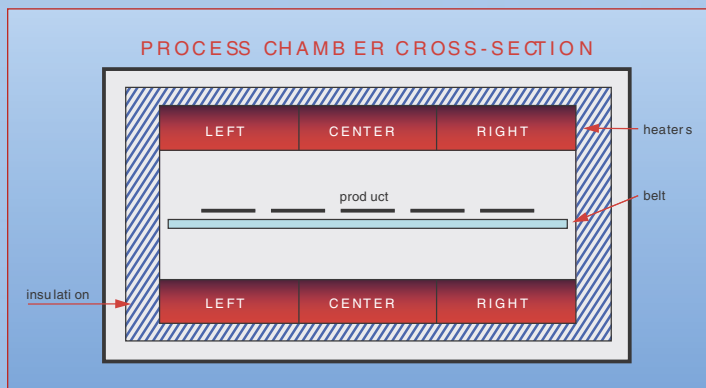
* Additional configurations available to meet your exact process requirements. **Less than background supply. Specifications subject to change without notice.

Controlled Atmosphere Furnace

Temperature Control

BTU's muffle furnaces maintain temperature uniformity by utilizing automated thermal controls and segmented heated sections programmed and controlled by the WINCON® system software.

- Equipped with top and bottom heaters (side heaters optional)
- $\pm 2^{\circ}\text{C}$ across belt uniformity typical

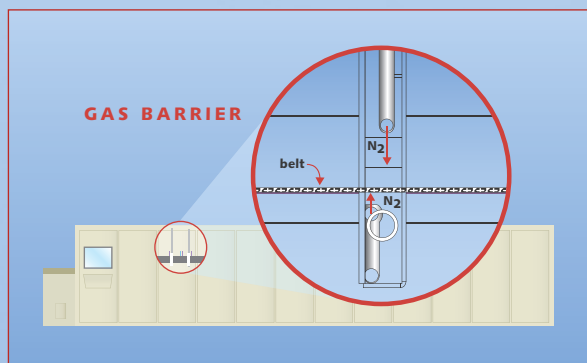


Eductor Heating/Cooling System



BTU's patented eductors provide rapid convection cooling in a shorter footprint, saving time in the furnace. Eductors can also provide fast, controlled heating through convection flow of heated gas.

Atmosphere Control



The Controlled Atmosphere Furnace from BTU features precise atmosphere controls to monitor critical parameters within the process chamber. The gas control panel is designed to operate in a safe/ failsafe manner while minimizing operator intervention.

- Achieves O_2 and moisture levels of $< 2\text{ppm}$ and H_2 purity of 95%
- Optional gas barriers provide isolation of gases for maximum atmosphere control
- Monitoring devices for flow and pressure confirm adequate gas supply
- Gas safety system monitors ignitors to ensure spent process gas is combusted prior to entering the atmosphere (Hydrogen) or (Reducing Atmosphere)

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