BTU has a long history of supplying industry with inert and hydrogen atmosphere furnaces. Whether it is high purity muffle applications or general purpose muffle-less applications, BTU has a unique set of capabilities, know-how and experience supporting precision temperature and atmosphere applications.

Solar Cell Annealing can be applied in a variety of solar cell manufacturing steps. Results can be quite beneficial depending on the application, cell structure and mechanism of improvement.

## Lab Scale Systems
- Max Temp Rating: 500°C
- Operating Temp: 250-450°C
- Heated Length: 914 mm (36 in.)
- Belt Width: 355 mm (14 in.)
- Atmosphere: Inert or up to 10% Forming Gas
- Throughput: 50-100 WPH (156 mm)
- OAL: 4.5M (15 ft.)
- OAW: 762 mm (30 in.)

## Production Scale Systems
- Max Temp Rating: 500°C
- Operating Temp: 250-450°C
- Heated Length: 6705 mm (264 in.)
- Belt Width: 9144 mm (36 in.)
- Atmosphere: Inert or up to 10% Forming Gas
- Throughput: 1000-1200 WPH (156 mm)
- OAL: 12.4M (41 ft.)
- OAW: 1371 mm (54 in.)
**Temperature Control**

Each wafer is exposed to the same temperature profile across the width of the belt. BTU utilizes automated thermal controls and segmented heated sections enabling the user to control temperature uniformity across the belt to within ±2°C.

**Atmosphere Control**

Uniform exposure to the correct atmosphere is a critical attribute in solar cell annealing applications. Whether it is an inert atmosphere in nitrogen, or a custom forming gas mix, BTU has the technology to safely control and manage process chamber atmosphere.

- **Optional gas barrier technology enables precise isolation of atmosphere**
- **Oxygen levels as low as 2 parts per million above source**
- **Forming gas up to 10% H₂ in N₂**
- **Redundant atmosphere monitoring systems and igniter burn-off for forming gas mixes above 4% H₂ in N₂**

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**Headquarters | United States**

BTU International, Inc  
23 Esquire Road  
North Billerica, MA 01862, USA  
☎ 1-978-667-4111  
📞 1-978-667-9068  
✉️ btuhq@btu.com

**Europe**

BTU Europe Ltd., UK  
☎ +44 (0) 1252 660010  
📞 +44 (0) 1252 660011  
✉️ sales@btu.co.uk

**Asia Pacific**

BTU Shanghai, China  
☎ +86-21-58669098  
📞 +86-21-58669231  
✉️ btuasia@btu.com

To contact BTU please go to [www.btu.com/support-contact-sales.htm](http://www.btu.com/support-contact-sales.htm)