



# Beltrotherm

Thermal curing equipment



## Thermo-Trockner BELTROTHERM



### BELTROTHERM

#### Thermal curing equipment

For the production of PCB's, membran switches, scales, panels by phototechnique or screen printing.

#### Application:

Predrying and curing of photosensitive inks and soldermasks -single or double sided- on flat or V-belt transport system, curing of conductive carbon, silver, copper inks, two component inks as well as all thermal drying inks.

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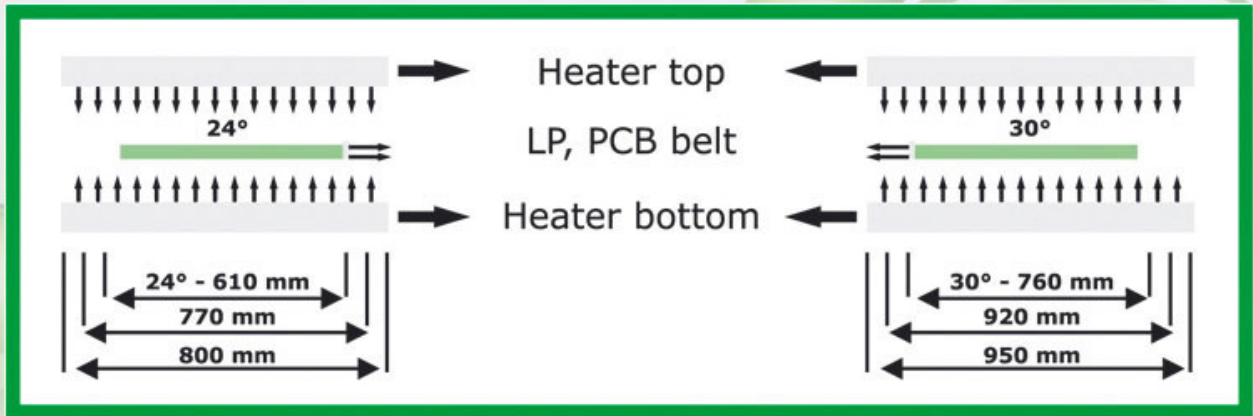


# Beltrotherm

The Miracle of fast Curing



## Thermo-Dryer BELTROTHERM



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Same IR-radiation and convectional heat from above and/or below to each board due to selected temperature profile.

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# Beltrotherm

The Curing System



## Thermo-Trockner BELTROTHERM



### Application:

Production of PCB's, Flex-Boards, Membran Switches, Graphic and Technical Products i.e. Tack Drying and Final Curing of Photoimageable Soldermask, Curing of Carbon-, Silver-, Copper- and Heatsink-Paste, Curing of Two Pack Inks, Resins, Isolation Materials and all thermal curing materials.

### Technology:

Curing is realized by a combination of long wave IR-radiation with circulating hot air. A conveyerised flat belt system moves each board through the temperature profile. The boards are cured double-sided. The curing times could be reduced to about 1/6 of the curing time in a batch oven.

- Final curing of photoimageable soldermask in about 8-10 minutes.
- Tack drying of photoimageable soldermask in about 4-5 minutes.
- Curing of Carbon-, Silver-, Copper-, Heatsink-Paste in about 1-3 minutes.

### Control:

A PLC-Control with a Touch Screen Panel controls and monitors all functions. 10 programs could be saved and print function meets the requirement of process control.

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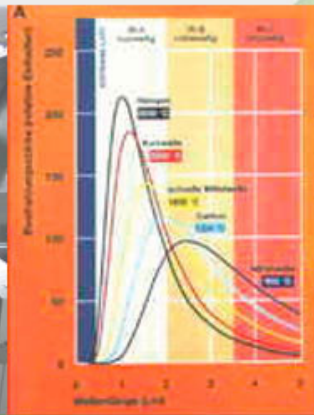
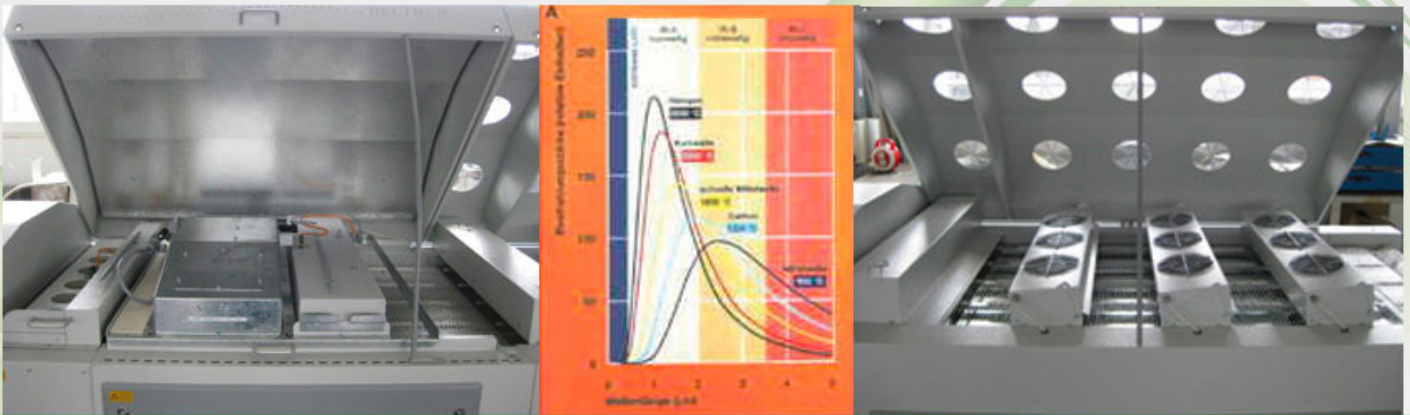


# Belthrotherm

IR - spectrum of the ceramic heater



## Thermo-Dryer BELTRO THERM



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The ceramic-heaters in the opened curing channel: 3 above and 3 below the belt.

Distribution of a black body to the wave length:

At a temperature of 300° C = 573°K a wave length will be produced of  $\lambda_{max} = 2900/573 = 5 \mu m$

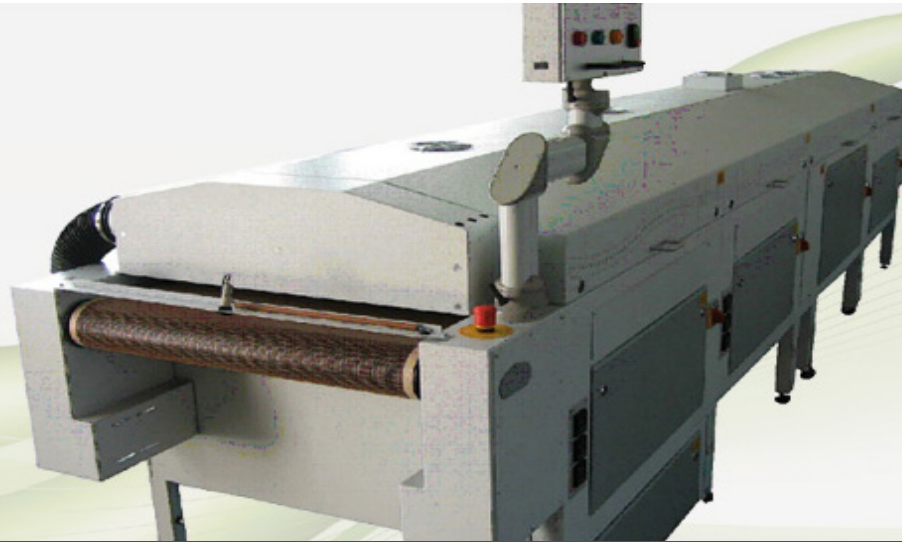
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### Technical Information Beltrotherm

- Working widths: 610 mm / 24" or 760 mm / 30"
- Belt speed: adjustable
- Tack drying soldermask: 0,5 - 50,0 m/min.
- Curing soldermask: 0,2 - 2,0 m/min.
- Curing paste: 0,5 - 5,0 m/min.
- Temperature range: RT - 250°C
- Electrical connection: 400 V 3/N/PE 50 Hz
- Connecting power per module: 9,3 kW / 18,6 kW
- Working power per module: 4,6 kW / 9,3 kW
- Supply air, exhaust air per Module 100 - 300 m<sup>3</sup>/h
- Module length: 1000 mm
- Module width: 1000 mm
- Module height: 1200 mm
- Available modules:
  - tranquilizers module
  - Abdunstmodul
  - heating module
  - cooling module
  - Inlet / outlet, various
  - PLC control: In the mobile console with touch-screen screen

The Thermo-Dryer BELTROTHERM are used successfully in:  
printing industry, electronic industry, plastic industry, textile industry, packaging industry,  
automotive industry and glass industry.

*These are just a few examples from the various partner portfolio of Beltron.*