

Infrared Heat for Glass Processing

Contact free and controllable Infrared heating technology

Many process stages in glass processing need heat. Infrared heating technology offers excellent provision for solving these heating processes, effectively and efficiently.

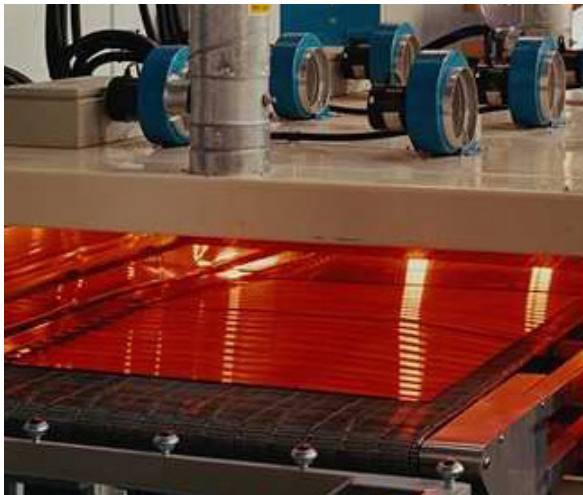
- Drying of coatings on glass and mirrors
- Screen print on car glass
- Annealing of incandescent bulbs and energy saving lamps
- Preheating of glass bottles
- Heating processes of glass under vacuum conditions
- Manufacture and cutting of laminated glass

Photo: Laminated glass is separated into smaller pieces with the aid of infrared heat.

Infrared heat is always used when heating processes need to meet specific requirements in terms of place, time and quality.

Energy efficiency by exact matching

- high heat transfer capacity
- contact-free heat transfer
- high efficiency
- efficient energy transfer by using the optimal wavelength
- localised energy input by matching the heating to the shape of the product to be heated
- time focused energy input because of the rapid response times



Drying of paint, coating or print on glass

Screen print on car glass, coatings on mirror backs or decorative painting - the widest range of coatings on glass are dried reliably and in-line with infrared emitters.

Infrared radiation penetrates into the material and dries the lacquer film from the inside outwards. The result is a brilliant surface quality. Compared with hot air drying, time, space and energy are saved.

Annealing of glass

Glass develops stresses when it cools off, for example after forming. To remove such stresses and reduce scrap, glass is subjected to an annealing process, at a controlled temperature profile. Infrared emitters are particularly suitable for this because of their excellent controllability.



Processing of laminated glass

Laminated glass is produced from several sheets of glass, which are joined by a plastic foil. This process requires several heating steps that can be done by infrared radiation very efficiently.

Laminated glass is made in very large sheets and needs to be split up into smaller pieces. Often the glass is scored, broken and then the foil is separated with the aid of infrared heat. Heraeus twin tubes can be produced in lengths of up to 6.3m and allow the cutting of the large sheets in one step.



Preheating of glass bottles

Hot fruit or vegetable juices filled in cool glass bottles - there is a significant danger of cracking the bottle. The juices are pasteurised at about 80°C; glass bottles arrive on the line at ambient temperatures. A thermal shock can cause cracking and so the bottles have to be preheated. A British company changed their preheating oven successfully from energy intensive steam to infrared radiation.

Now a carbon infrared system heats the empty bottles. Carbon infrared emitters proved to heat at high efficiency as their medium wave lengths match exactly to the absorption spectrum of glass.

Germany

Heraeus Noblelight GmbH

Infrared Process Technology

Reinhard-Heraeus-Ring 7

63801 Kleinostheim

Phone +49 6181 35-8545

hng-infrared@heraeus.com

www.heraeus-noblelight.com/infrared

USA

Heraeus Noblelight America LLC

910 Clopper Road

Gaithersburg, MD 20878

Phone +1 (301) 527-2660

info.hna@heraeus.com

www.heraeus-thermal-solutions.com

Great Britain

Heraeus Noblelight Ltd.

Unit 1 Millennium Court

Clayhill Industrial Estate

Buildwas Road

Neston, Cheshire, CH64 3UZ

Phone +44 151 353-2710

ian.bartley@heraeus.com

China

Heraeus Noblelight (Shenyang) LTD

Shanghai Branch

No.399 Guangzhong Road

Minhang District, 201108 Shanghai

Phone +86 400 080-2255

info.hns@heraeus.com

www.heraeus-noblelight.cn