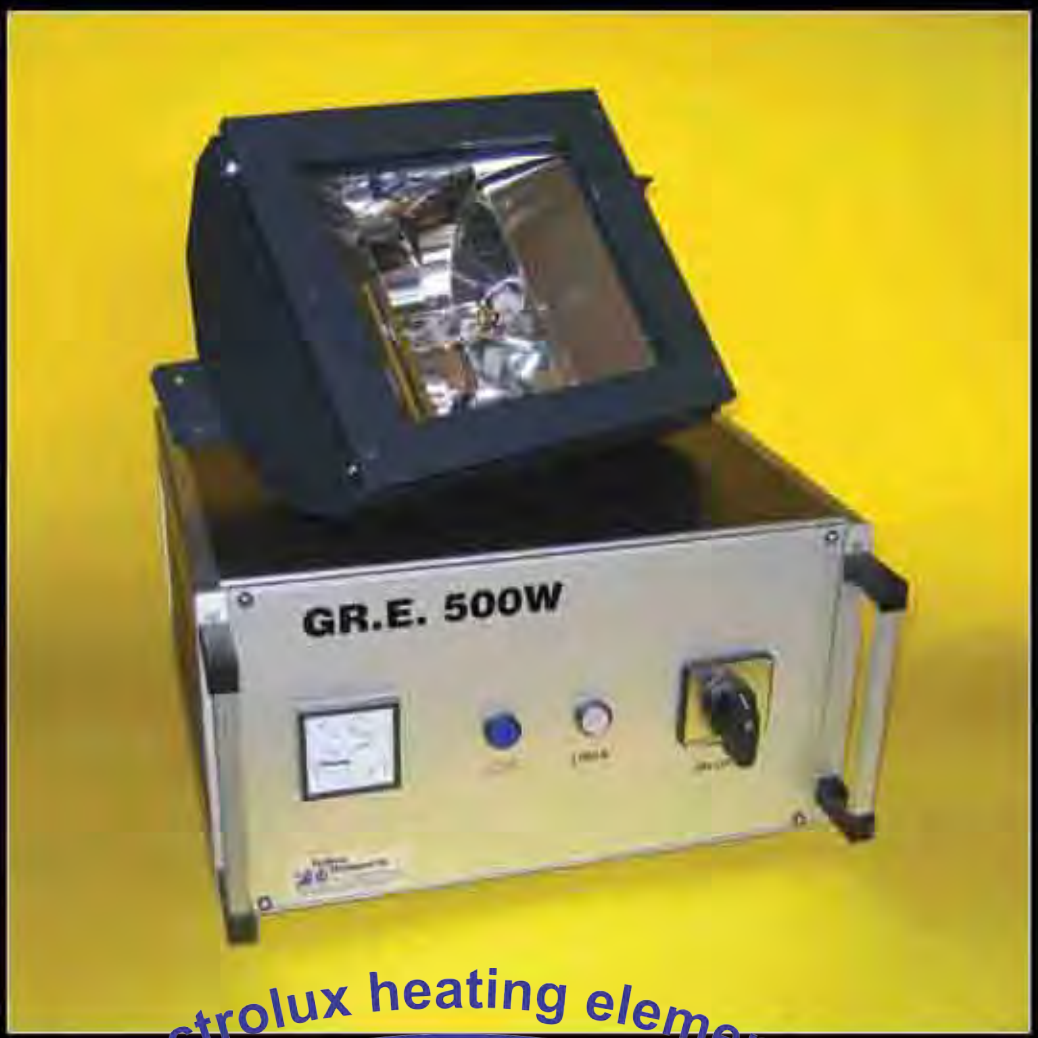
UV POLYMERIZATION EQUIPMENT



Electrolux heating elements

UV POLYMERIZATION EQUIPMENT

Helios Italquartz has been manufacturing for many years the UV polymerization equipment which is particularly useful for general photo-polymerization process such as drying films of reactive inks, lacquers and paints, bonding glass to glass, glass to metal or electronic components set with reactive adhesives.

The photo-polymerization process consists in a fast conversion of liquid monomer into solid and hard polymer film by the exhibition to a very strong ultraviolet radiation, the exposing time is different according to monomer reactivity and film thickness. In case of bonding glass to glass or glass to metal, care must be taken to maintain the temperature of coated film bonded surface below 120°C, in order not to reduce the adhesive sticking strength.

UV polymerization equipment product range is represented by two basic instruments of 400 and 500 Watt, 230 Volt single-phase. The 1000 Watt Polymer may be supplied on request.

All polymer models, made according to CEI standards 62/5, may be supplied with voltage line 230 Volts single-phase 50 Hz or 60 Hz (on request), control panel at 24 Volts with fusible plug, line warning light and power switch.

The lamp reflector is made by double metal body with insulated handle. The reflecting part has been built with a special chemical treatment which allows high UV radiation ratio and low temperature transmittance. All polymer units are ready to use and equipped with a pair of protective safety glasses.

All polymer models can be equipped with the following types of quartz UV mercury vapour lamps, according to customer requirements.

LAMPS

Zp type are available with complete spectrum emission from 180 nm to visible range of wavelengths, therefore UVC, UVB and UVA radiation emission. This kind of lamp is particularly useful when total lamp power is required for drying high thickness ink, paint film or in case of bonding high thickness transparent supports with reactive adhesives. Zp are generally used for inks and pigmented coatings. They offer a strong UV emittance from 254 nm to visible range of wavelengths. Maximum care must be taken by wearing suitable safety glasses when lamps are switched on.
Zh type are available with UVB and UVA ozone free emission from 310 nm to visible range of wavelengths. It is particularly useful for textile printing inks. Special screened quartz glass from UV wavelength 310 nm mainly used for textile printing inks.
Zs type are available only with UVA emittance from 360 nm; ozone free. Zs are mainly used for glass sheets bonding with UV reactive adhesives. They are made with ozone free special quartz glass that cuts the wavelengths below 320 nm.
In case of correct use (that is switching on/off no more than once or twice a day) we suggest our customer to replace lamps at about 1500 hours of working time.

ACCESSORIES

Carrier with electric cooling fan. It is particularly useful for lamp stand by while lighted; it saves lamp operative life and prevents it from burning.
Polymer reflector carrier - Cod. 85L01115

SECTORS INVOLVED

- Graphic and Printing
- Universities' laboratories
- Glass
- Wood
- Plastic
- Every other sector where resins, glues, paints or products are activated to polymerise through the UV light exposure.

The producer of goods that react with the UV light have to specify on the product data sheet the type of lamp that it is necessary to use in order to obtain a good reaction.