

POLIMER

UV  
POLYMERIZATION  
EQUIPMENT

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**helios quartz**



# POLIMER

## UV CURING

UV technology represents one of the major innovations in the development of polymers. The UV process high-intensity light is used to cross-link resins in varnishes or inks. During conventional cross-linking hot air fosters the aggregation of polymers in the solvent, which evaporates due to the high temperature.

The cross-linking process occurs thanks to a beam of ultraviolet light activating specific substances (called photoinitiators) that are present in the product; these trigger a polymerization reaction, which occurs in a very short span of time (1-2 seconds).



## POLIMER

Helios Quartz has been manufacturing for over 70 years UV polymerization equipment which is particularly useful for general photo-polymerization process such as drying films of UV reactive inks, lacquers and paints, bonding glass to glass, glass to metal or electronic components set with UV reactive adhesives. In case of bonding glass to glass or glass to metal, care must be taken to maintain the temperature of the coated film bonded surface below 120°C in order not to reduce the adhesive sticking strength.

Helios Quartz POLIMER apparatus is universally recognized as the most reliable UV polymerization equipment available in the market and its product range is represented by two basic instruments of 400 and 500 Watt, additionally the 1000 Watt POLYMER may be supplied on request.

### Complete Polimer apparatus

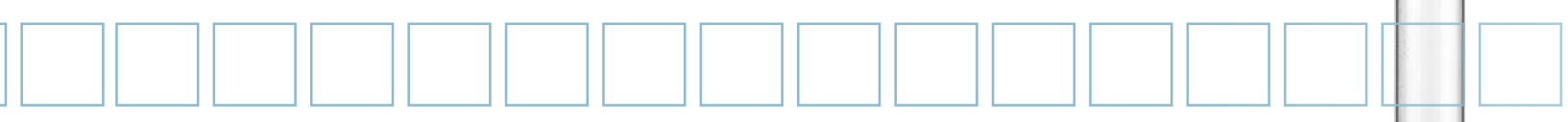
- Polymer 500W – Cod. 85L00008
- Polymer 400W – Cod. 85L00002



# ACCESSORIES

**UV REFLECTOR CARRIER** with electric cooling fan. It is particularly useful for the UV reflector stand by (while it is lighted), in fact it saves lamp operative life time and it prevents from harmful UV environment irradiation.

## SPECIAL SAFETY GLASS



The UV reflector, equipped with a comfortable insulating material grip, is easily handled by the operator also is predisposed with mounting system for in line applications. It is formed by a double metal body in which is housed the ultraviolet lamp; Helios Quartz, thanks to the great experience, has developed the design of the reflector to optimize the reflection of the ultraviolet radiation and to minimize the heat transmission produced by the ultraviolet lamp, also the reflector is equipped with a protective quartz glass plate permeable to ultraviolet radiation.



*Control panel*

All POLIMER models are manufactured according to CEI 62/5 standards moreover POLIMER device is supplied with voltage line 230 Volts single-phase 50 Hz or 60 Hz (on request); the control panel is equipped with a master power switch and light voltage indicator, with a UV lamps power switch 24 volt and related Voltmeter for UV lamp's voltage control. Specifically for the American market the device is provided to 110 volts.



*UV reflector*

### SECTORS INVOLVED

The POLIMER device is appreciated in all market niches where resins, glues, paints or products require UV exposure. In each case, Quartz suggests costumers consult the technical data sheets of the UV products in order to select the appropriate UV lamp and get the best UV curing process.

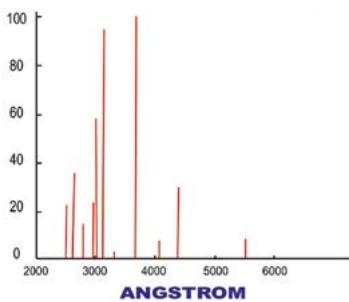
All POLIMER models can be equipped with the following types of quartz UV mercury vapour lamps, according to customer requirements and applications. Helios Quartz emphasizes the obligation for operators to use special safety glasses provided with the unit when the reflector is turned on, in case of non-use of them Helios Italquartz disclaims any responsibility.

- Graphic and printing
- Glass
- Universities and laboratories
- Wood
- Plastic

## UV LAMPS

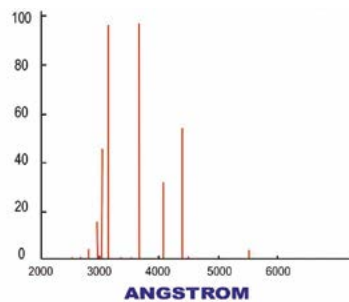
### Zp type

are available with complete UV spectrum emission from 180 nm to visible range of wavelengths, therefore UVC, UVB and UVA radiation emission. This kind of lamp is particularly useful for drying high thickness UV ink and paint films or in case of bonding high thickness transparent supports with UV reactive adhesives.



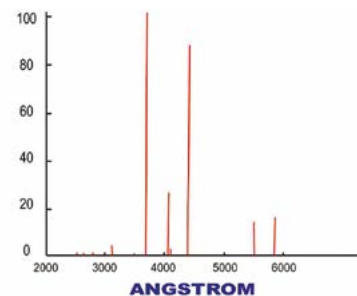
### Zh type

are available with UVB and UVA ozone free emission from 310 nm to visible range of wavelengths. It is particularly useful for textile printing UV reactive inks.



### Zs type

are available only with UVA emittance from 360 nm; ozone free. The lamps Zs are mainly used for the bonding of glass to glass or glass to metal through UV reactive adhesives.



Helios Quartz, in order to optimize the UV lamps lifetime, recommends the switching of on/off no more than once or twice a day. Once switched off the UV lamp reflector, in order to improve the UV lamp lifetime, it is recommended to wait about 15 minutes before switching it on again, moreover we suggest our customer to replace lamps at about 1500 hours of working time.





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