

How to improve cure and save energy in UV moulding ovens

Replacing existing UV lamps in Makor, Cefla and IST ovens with Fusion UV microwave powered lamps led to reduced temperature, better cure, higher production speed and as a bonus reduced energy consumption.

Problems related to UV oven for curing mouldings

EFSEN UV & EB TECHNOLOGY are often confronted with customers having problems related to their UV oven for curing mouldings.

The problems are:

- Unsatisfactory cure
- Substrates receiving too much heat
- Low lifetime on UV lamps

The result is a lot of waste of material and production time.

Solved issues with benefit of saving electrical energy

EFSEN has in a number of cases solved these issues and customers have got the added benefit of saving electrical energy.

The solution is to take out the old inefficient UV arc lamps – insert new fixtures in which we mount Fusion microwave powered UV lamps.

The Fusion lamps have a much higher intensity, and this is the bases for a good and even cure on 3D objects with a max width of 200mm and a height of 60mm.

In addition, we improve ventilation and supply an electrical cabinet for the Fusion UV lamps.

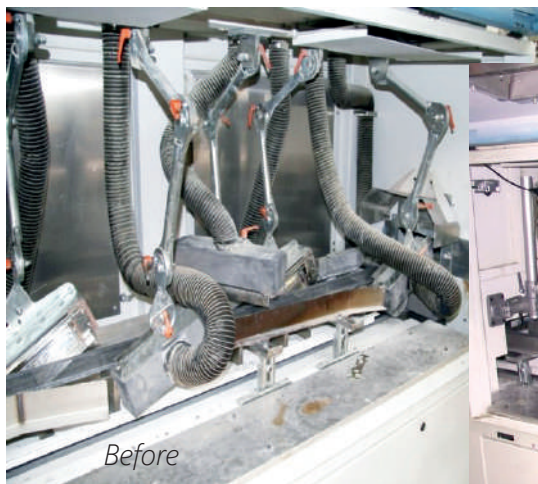
Makor oven with new Fusion lamps and electrical cabinet.



Our technicians can help or do the installation and it normally take two persons two days to make the change. We finish the job by training the operators in running the "new" UV oven and advises best manners for getting optimum cure results.

The reason that Fusion UV is a solution to above mentioned issues is that Fusion UV delivers a high intensity of UV to the substrate and therefore it is a more powerful way of curing (See PowerView graph comparing 240W/cm arc lamp with Fusion 240W/cm).

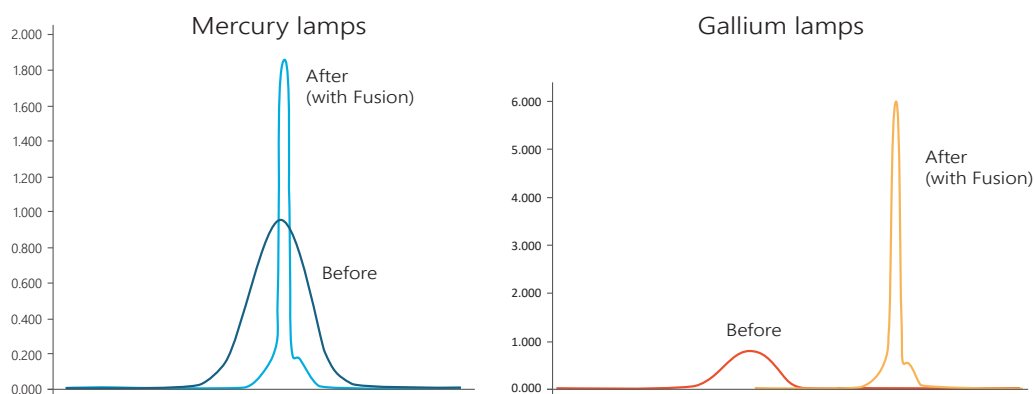
If you are coating pigmented lacquers, you need two sets of three Fusion UV lamps (1 set = 1 from above and 1 from each side). If you only have clear coats, then you will be fine with one set of UV lamps.



UV ovens from Makor, Cefla and IST has been rebuilt with success.

Benefits with Fusion UV lamps

- ✓ Higher power
- ✓ Higher intensity
- ✓ No mechanical shutters
- ✓ Less heat
- ✓ Better curing properties
- ✓ Service by EFSEN



The graphs show the intensity from the top curing lamps before and after installation in an old Makor oven (Measured with an EIT PowerMap).