

MANUFACTURING OF PHOTOPOLYMER TEXT PLATES

Liquid polymer and Instaplate



The Polymer Machine*



Eccentric plate

Wash-off basin

Control panel

Exposure chamber

Post-exposure chamber

Drying chamber

Pre-heating vessel

TIP: Reduce photopolymer viscosity (consistency). This causes fewer air bubbles and it is also easier to pour.

*Illustration shows a fully-equipped polymer machine. Process is also identical with other machines.

1. Filling the wash-off basin



1.1 Open the tap on the rear of the machine and fill the wash-off basin until the brushes are covered



1.2 Dissolve 2 - 3 caps of IDEAL iLW (wash-off concentrate) per 20 liters of water...

Add 1/2 cap of IDEAL iBooster for hard water. If there is no information about the water hardness, we recommend using IDEAL iBooster preventively to benefit the quality. Information about the drinking water hardness is available from local water suppliers (e.g. municipality).



... and add to the water in the wash-off basin.
To prevent foaming, add 2 drops of Ideal iDFOAM as required.

2. Filling the post-exposure basin



2.1 Dissolve 1 cap of IDEAL iPXC-L per 2.5 - 3 liters of water + 1 teaspoon of iPXC-P (if necessary, add 1 cap of anti-foam solution to avoid excessive foaming)

TIP: use hot water for better solubility!



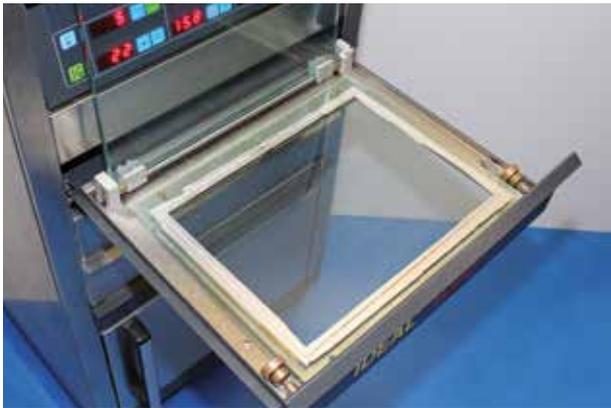
2.2 Fill the post-exposure basin approx. 0.4" high

3. Switch on the polymer machine

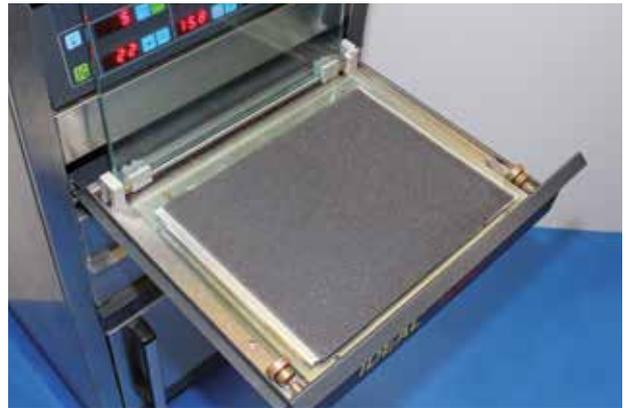


3.1 Switch on the polymer machine and allow the lamps to heat up for approx. 30 seconds

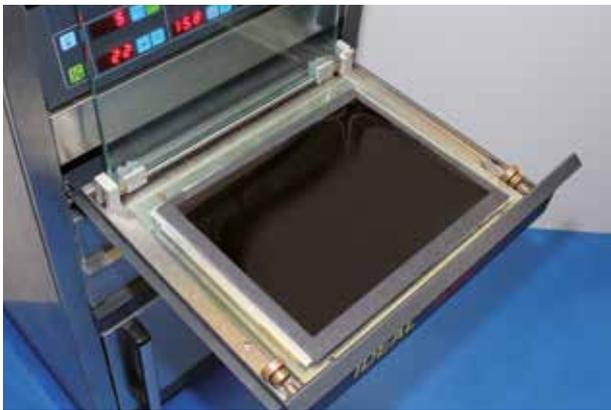
4. Producing negatives



4.1 Open the exposure chamber

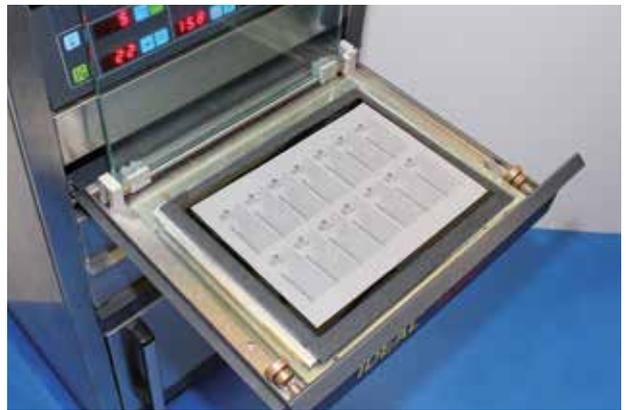


4.2 Insert foam to cover and achieve the right height



4.3 Insert IDEAL AQ-film in the correct size and coating upwards

TIP: scratch with a sharp object to see the coating

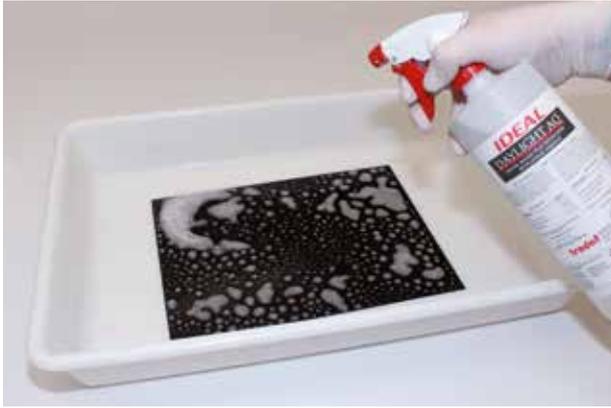


4.4 Insert IDEAL Vellum with the toner side facing down

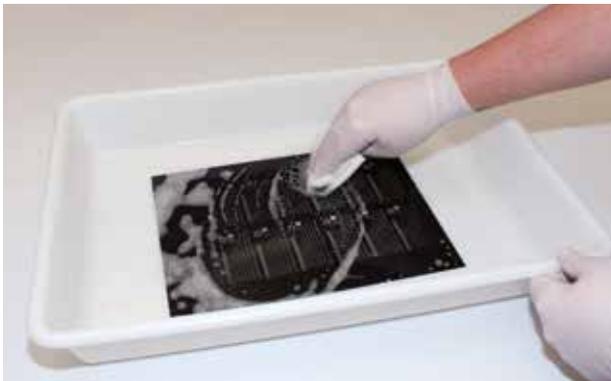


4.5 Expose the negative from above for approx. 150 seconds

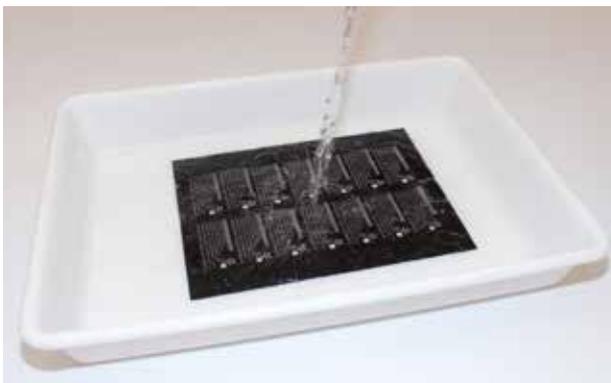
The exposure time may vary for different machines, light sources and climatic conditions! 150 seconds is a guideline.



4.6 Remove the negative, spray sufficiently with IDEAL AQ and leave for approx. 20 seconds



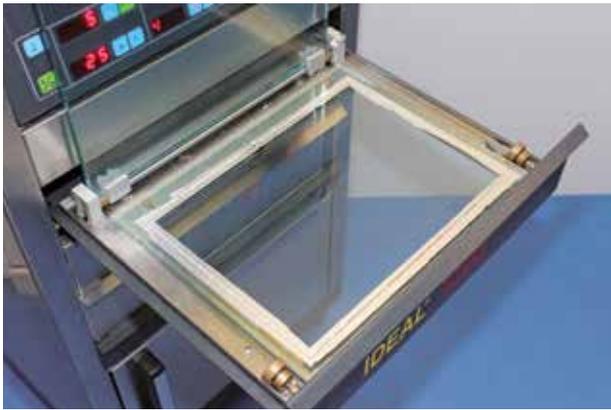
4.7 With a paper towel, gently wipe away the coating without any pressure (it may damage the negative). Should there still be greyish areas, spray again with IDEAL AQ and wipe away immediately.



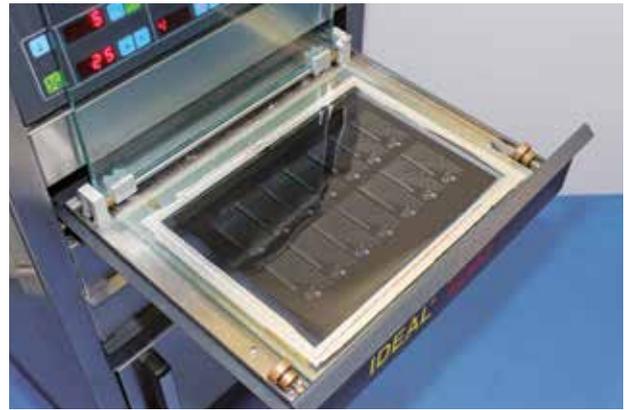
4.8 Wash off the negative well

4.9 Thoroughly dry the negative

5. Text plate production with liquid polymer



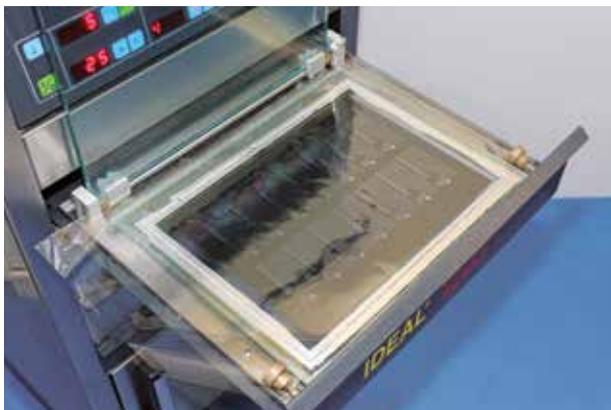
5.1 Open the exposure chamber



5.2 Insert the negative with the readable side facing up



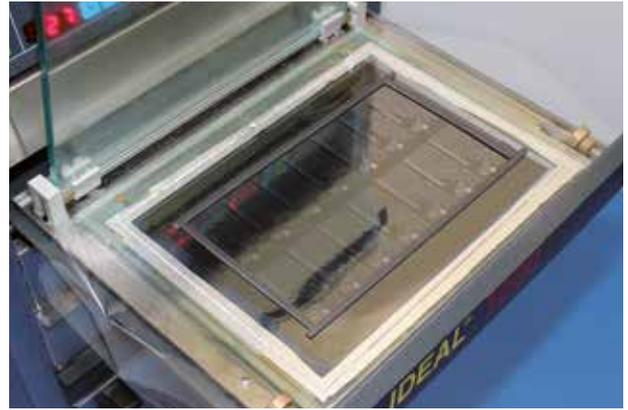
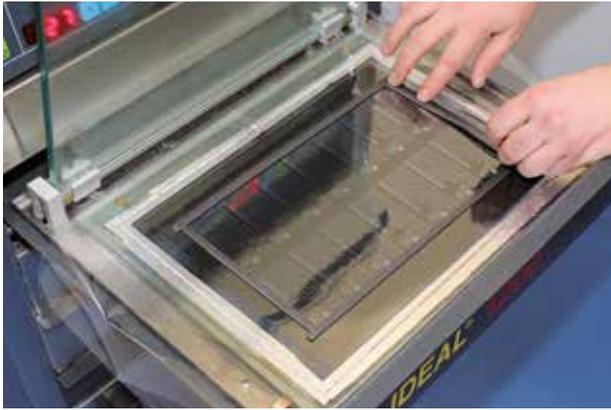
5.3 Switch on the vacuum system



5.4 Apply the IDEAL Cover Film ...



... and knead out all of the air



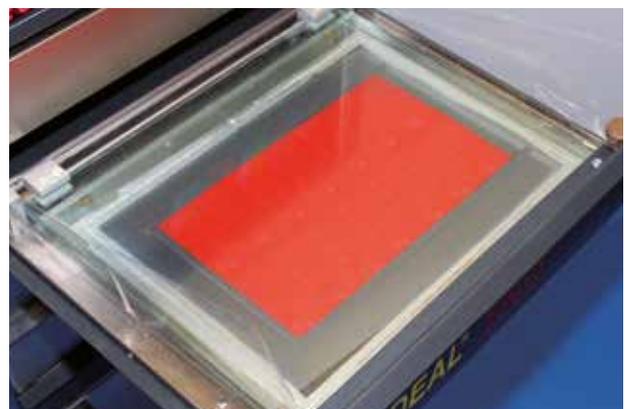
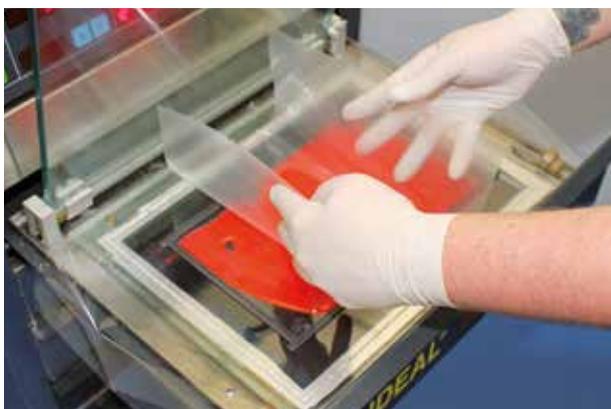
5.5 Mask the image area with the IDEAL sealing tape, without any gaps



5.6 Fill the image area with liquid IDEAL photopolymer

5.7 Blow out air bubbles using compressed air

ATTENTION: Pay close attention to the amount as excess polymer can soil the machine



5.8 Apply backing film - place the rough side facing down on the polymer

5.9 Lower and lock the glass plate

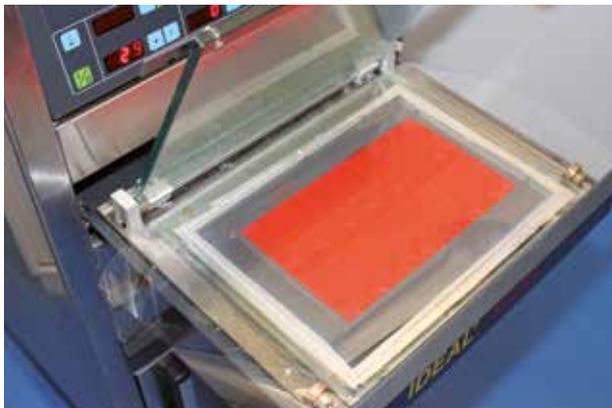


5.10 Close the exposure chamber and expose the polymer from above for approx. 18 seconds, from below for approx. 90 seconds

The exposure time may vary for different machines, light sources and climatic conditions!



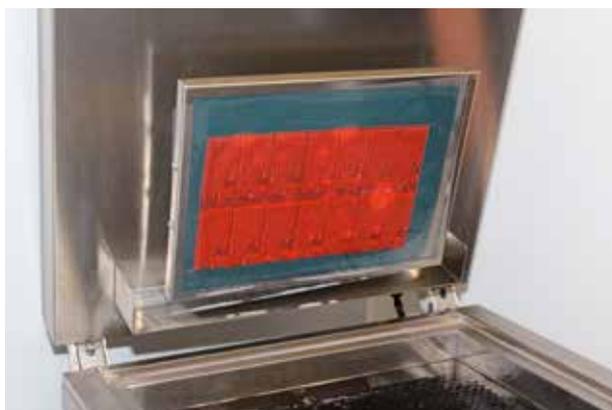
TIP: To improve the quality, activate the upper exposure chamber first and then IMMEDIATELY activate the lower exposure chamber.



5.11 After the time has elapsed, open the exposure chamber, remove the polymer



5.12 Remove the protective film including sealing tape



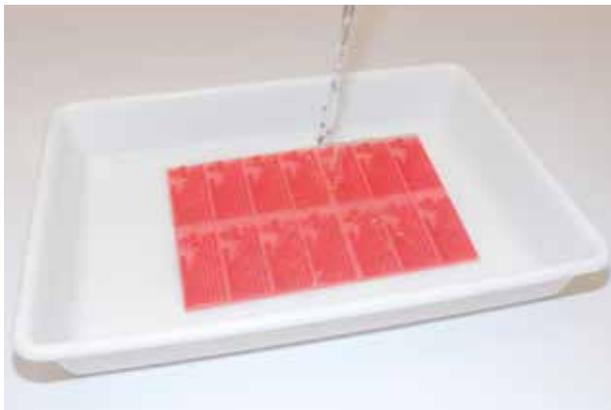
5.13 Adhere the polymer to the eccentric plate of the wash-off basin and close the lid



5.14 Wash the polymer for 180 seconds



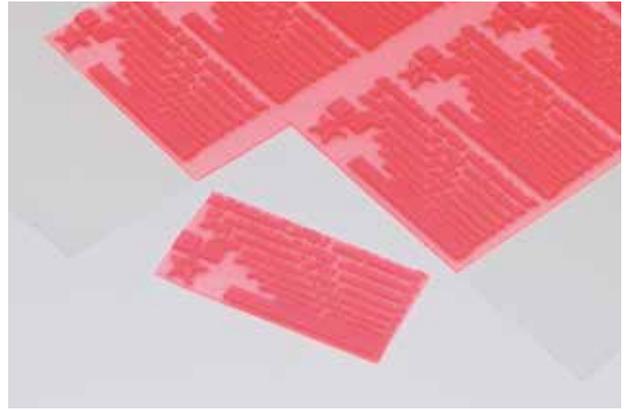
5.15 Insert the cleaned polymer plate into the post-exposure chamber and expose for approx. 300 seconds



5.16 Thoroughly rinse the polymer plate

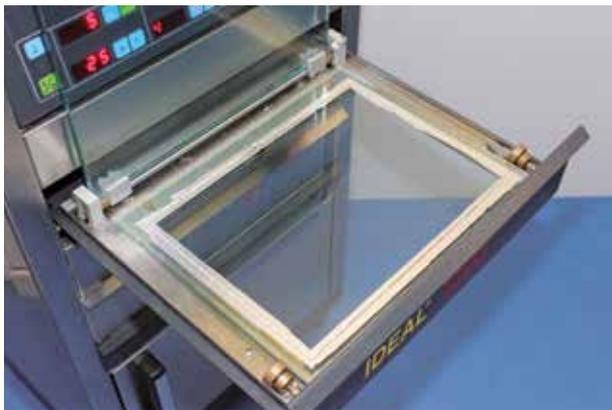


5.17 Insert the Instaplate into the drying chamber with relief facing upwards and dry for 5 minutes

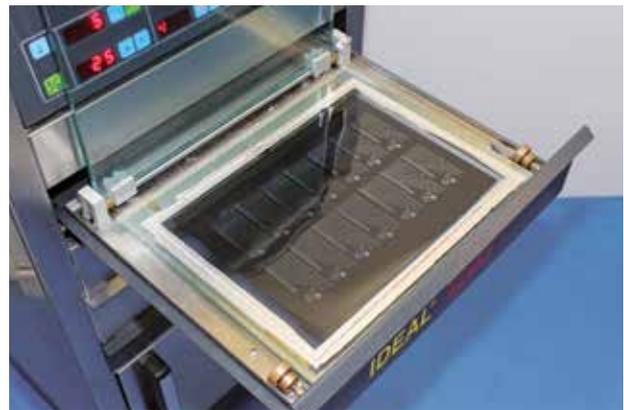


5.18 The Instaplate text plate is **DONE**, for further use cut out individual imprints and stick them on the desired stamp model!

6. Text plate production with Instaplate



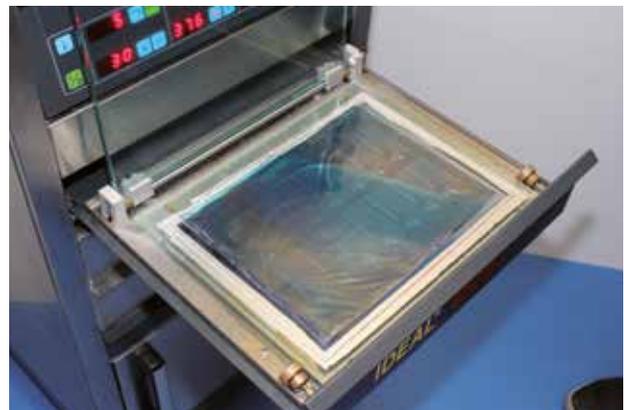
6.1 Open the exposure chamber



6.2 Insert the negative with the readable side facing up



6.3 Apply the Instaplate in the desired size (A4, A5,...) („Instaplate“ inscription must be legible), lower and lock the glass plate



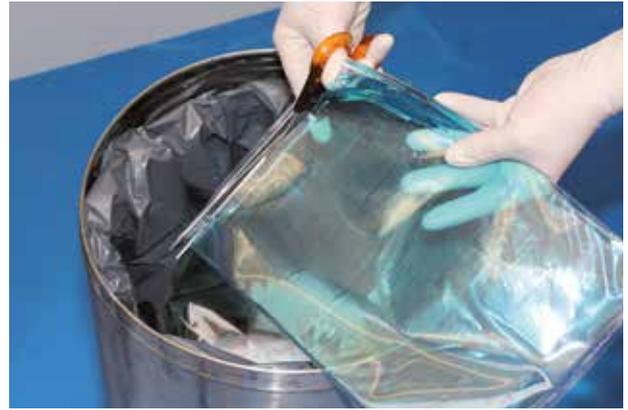
TIP: To improve the quality, activate the upper exposure chamber first and then IMMEDIATELY activate the lower exposure chamber.

6.4 Close the exposure chamber and expose the polymer from above for approx. 18 seconds, from below for approx. 90 seconds

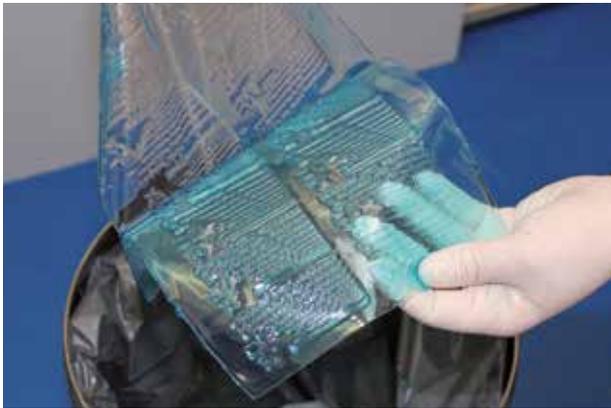
The exposure time may vary for different machines, light sources and climatic conditions!



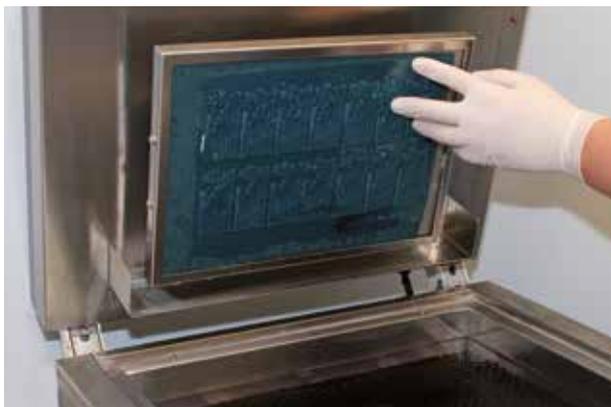
6.5 After the time has elapsed, open the exposure chamber, remove the polymer



6.6 Cut all 4 edges



6.7 Pull off the thin protective foil (on the front of the text plate) the backing film remains on the polymer



6.8 Adhere the Instaplate to the eccentric plate of the wash-off basin and close the lid



5.14 Wash the polymer for 180 seconds



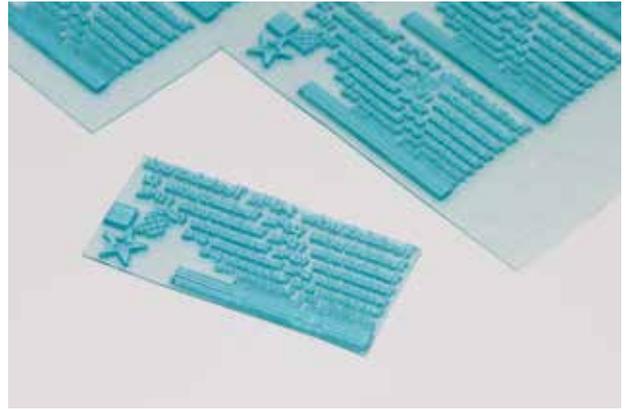
6.9 Insert the cleaned Instaplate into the post-exposure chamber and expose for approx. 600 seconds



6.10 Thoroughly rinse the Instaplate



6.11 Insert the Instaplate into the drying chamber with relief facing upwards and dry for 5 minutes



6.12 The Instaplate text plate is **DONE**, for further use cut out individual imprints and stick them on the desired stamp model!

7. Cleaning the polymer machine



7.1 Open the drain cock on the rear and empty the wash-off basin



7.2 Remove the wash-off plate with brushes and thoroughly clean



7.3 Clean the wash-off basin and remove any residue



7.4 Empty the post-exposure tray once removed and thoroughly clean