



## Ink Spitting Free Engraving

Due to the inherently viscous nature of UV inks (being as much as five times that of the water base ink types) within the transfer zone of the press, high hydraulic forces are being applied to the doctor blade. The thicker UV ink creates a hydroplaning effect that actually lifts the doctor blade a very small amount and causes “extra” ink to seep under the blade and transfer to the plate. This excessive ink then prematurely releases from the plate – especially at higher press speeds – and results in what can be a very troublesome print defect. It has also been reported that if there is contamination in the ink or if the ink wasn't



ground properly so that small amounts of pigment migrate underneath the doctor blade, this can create the opportunity for poor blade metering and an uneven ink film – thus leading to potential ink spitting.

Key control points for minimizing ink spitting are the doctor blade and metering set up. Pressroom testing has proven that using a thicker blade minimizes UV spitting as the stronger blade better resists the hydroplaning effect and does not allow too much ink to transfer to the anilox roll. However, too thick a blade can also cause problems.



In the early 1990's, Praxair Surface Technologies (PST) created a new engraving pattern, ink spitting free (ISF), that proves that the use of channel engravings is an effective way to eliminate and prevent spitting. A channel engraving – either a continuous channel or linked-in cells – allows the ink to flow within the engraved channel across the anilox surface, decreasing the build-up of ink behind the blade, thus reducing the hydraulic pressure inflicted on the blade.



### How to Get Started. Contact Us Today.

Ask a Praxair printing specialist to recommend the best engraving for your application.

Call the nearest location or email [psti-info@praxair.com](mailto:psti-info@praxair.com).

Or visit [www.praxair.com/printing](http://www.praxair.com/printing) to learn more.

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