

Chamber/Anilox System

Q: How is this different than my current roll-to-roll coater?

A: The LithoCoat™ conversion from H&B is a performance upgrade to an existing tower or in-line coating station. The present roll-to-roll application method is converted to an Anilox/Chamber system, complete with coating circulator and enhanced wash-up capabilities. This single roll application method provides enhanced performance while ensuring consistent coating lay down.

Q: What are the main advantages of this system?

A: This conversion will allow you to lay down the coating much thinner and much more uniform than with a traditional multi-roll coater. Flat dull coatings without ribbing/striations are easily achieved as are precise edge definition on spot UV coatings. An added bonus is a significant reduction in coating usage, even on simple work and turn orders.

Q: I see striations/ribbing while running dull coatings, how will that change with the LithoCoat system?

A: Due to the nature of the process, traditional roll-to-roll coaters have difficulty transferring coating smooth and consistent, therefore leaving marks or flaws in the end product. With the anilox and chambered systems like the LithoCoat conversion – dull, gloss, and other coatings can be applied with little effort and superior results.

Q: What type of guarantee do I have that this will work for me?

A: We proudly offer a 100% Satisfaction Guarantee on all H&B products. This includes the coating capabilities as well as the hardware. We interface with all appropriate co-suppliers to insure that the conversion is easily achieved.

Q: Do I need to use special coatings or change my current coating supplier with the LithoCoat system?

A: It is not necessary to use different coatings or suppliers with this system. The coating manufacturer may need to make a few changes in the coating and/or modify the viscosity for optimal performance. Keeping the coating supplier in the loop for roll specifications and testing ensures the fastest and most successful start-up. H&B will coordinate this also to insure a smooth transition.

Q: What coating blankets should be used?

A: With this conversion, the blanket cylinder remains in the exact same position. The press manufacturer's normal packing and blanket thickness recommendations are used. For most flood applications standard coating blankets are very common. When spot coating is required, peelable blankets or raised image photopolymer coating plates are often used. H&B can provide you with a list of suppliers in your area.

Q: How long does the installation take?

A: Normal installations require about two to three full shifts of downtime. On back shifts, the press can normally be run (non-coated jobs) to minimize down time. An H&B technician is usually at the site most of the week to install the equipment, aid in start-up, and offer training to all shifts.

Q: Can I specify this equipment on my new press purchase?

A: This system can be ordered through the press manufacturer on a new machine or purchased as a retrofit to an existing press.

Q: On what Offset press types can this unit be installed?

A: The H&B LithoCoat system has been installed on most popular machine types, including: Komori, Mitsubishi, Heidelberg, MAN Roland, KBA Planeta, Sakurai, and others.

Q: I have an add-on blanket coater, can this be converted to the LithoCoat technology?

A: In most cases an existing blanket coater can be converted to include a ceramic anilox roll and the chambered doctor blade system. Improvements in performance along with faster clean-ups and less slinging can be expected.

Q: What is an anilox roll?

A: The anilox roll is simply a metering roll designed to consistently supply a uniform and measurable volume of liquid. Using a computer-controlled laser, millions of microscopic holes (or cells) are vaporized into the surface of the ceramic coating of the anilox roll. These cells are what actually cups and carries the coating to the blanket or plate cylinder.

Q: What rolls are removed and how is the new anilox driven?

A: The smooth chrome or rubber application roll presently in the press is removed and replaced with anilox roll of exactly the same physical dimensions. Depending on press type, split cap journals are installed to speed future roll changes. The existing press drive is re-used to maintain an exact surface speed match between the new anilox roll and the blanket cylinder. All of the other transfer rolls in the coater are removed.

Q: Can I run with just one anilox roll or do I need to change rolls with every coating?

A: A typical printer will usually require one roll that can be run with all of their coatings. However, if major variances in coating weight are required (example: switching from a flood work and turn to a blister coating) an additional roll with a different engraving may be required. A spare roll is also smart to have on hand.

Q: I hear of steel, aluminum, carbon fiber, chrome & ceramic anilox rolls. What's the best choice?

A: The core of the anilox roll can be made of steel or lighter-weight aluminum and carbon fiber. The downside to carbon fiber is a higher cost. Aluminum is half the cost of carbon fiber, can be re-engraved more times than carbon fiber, and is still light enough to be lifted without a hoist. All cores are ceramic coated and then laser engraved to exact specifications for the application. Mechanically engraved chrome rolls were used in the past, but industry experts agree that ceramic offers superior performance, accuracy and wear resistance. H&B only uses ceramic surface rolls.

Q: How do I determine the proper anilox volume?

A: As part of the complete package, H&B guarantees to supply the proper anilox roll for the application. We also offer the use of banded rolls (rolls with different volumes) to help in testing and ultimately deciding what the exact engraving should be.

Q: What are the terms used when discussing anilox engraving specifications?

A: There are 3 major characteristics in determining how the cells are engraved:

- Line Screen (l.s.): The number of actual cells measured in one linear inch.
- Cell Volume (bcm): The volume of one square inch of cells measured in billion cubic microns.
- Angle of Engraving: Angle in which cells are engraved in relation to the centerline axis of the roll.

A typical roll might be identified as: (180 l.s. 11.0 bcm 60 degree).