

Tips on Setting up a Duplicator Press

The primary function of a press operator is to deliver a constant flow of clean, sharp copies all day long. Correct ink and water balance is essential to accomplish this.

Perfect ink and water balance is achieved when you use just the right amount of ink to maintain even color and just the right amount of water to keep the non-image areas of the printing plate clean. Although perfect ink and water balance may be hard to obtain on a small duplicator, you can still come close by following some simple steps while inking up the press:

1. Start with a clean press by thoroughly decontaminating and conditioning the rollers.
2. Shut off the ink supply by turning the ink fountain screws clockwise.
3. Using an ink knife or ink cartridge, dispense a small amount of ink evenly across the ink fountain and then turn the fountain roller by hand. Check to see if there are areas across the roller that are allowing ink to go through. If there are, tighten that ink key slightly until the roller remains clean all across its length when rotating.
4. Open each key about one half turn (this may vary among presses). Rotate the fountain roller again and look for an even and uniform flow across the roller. If the flow is even, it is set for a minimum delivery to the remaining rollers. If the ink flow is not even, adjust the proper keys accordingly. Keep in mind that fountain keys regulate the amount of ink from side to side only.
5. Set the ink fountain roller ratchet at the midpoint position and ink up the press. (The ink ratchet handle controls the sweep or arc of rotation of the fountain roller. The more the sweep, the more ink that is fed to the inking system and ultimately to the paper).
6. Set the water fountain ratchet to about 1/4 its maximum setting.
7. Check the pressures of the ink and water form rollers. When the form rollers are inked, stop the press and then drop them onto a dry plate and check the pressures by noting the width and evenness of the stripes left on the plate.

Adjustments will have to be made for both ink and water, depending on ink coverage of the job being printed and the type of plate being used. When making these adjustments, it is best to adjust only one system at a time, whether it's ink or water. It is important to resist the urge to spin the water roller or crank the ink roller by hand. This is only a temporary solution for either toning or light copy and can cause unevenness in color throughout the printed job.

When printing is under way, check overall printing quality and color print density. If density appears light, do not add more ink until you are sure you are not washing out the print by using too much water or fountain concentrate. Water is your enemy but a necessary evil. Once it has accomplished its task of keeping the no-image areas of the plate clean, it serves no further purpose. In fact it becomes a liability. Too much water can emulsify an ink, slow ink drying, wash out color brilliance and cause a general deterioration in quality. The idea is to use the minimum amount of moisture to keep the plate clean.