







SOP Reference #: LF0002\_Roll

Operation/Task:	<b>Large Format</b>			Equipment:	<b>Bronco – Roll to Roll</b>
Owner: Digital Manager	Large Format Print	Date Created: 11/1/25 Revision History:	See last page	Department: Digital	

ALERTS (see below): Critical Step  Quality Check  Tip  Team Safety 

**Purpose: This SOP/work instruction describes the process of printing on the large format**

Step #	Alerts	Step Description - “What to Do”	“How to Do it”	“Why to Do it”
1		Safety	<ul style="list-style-type: none"> <li>• Wear required PPE:               <ul style="list-style-type: none"> <li>◦ Gloves (when handling ink or cleaning fluids)</li> </ul> </li> <li>• Keep hands clear of carriage and moving gantry</li> <li>• Do not bypass safety interlocks</li> <li>• Be aware of UV curing lamps (avoid direct exposure)</li> <li>• Ensure proper ventilation in print area</li> </ul>	Prevent Injury / toxic exposure

2		Pre Op Checks	<ol style="list-style-type: none"> <li>1. <b>Power On</b> <ul style="list-style-type: none"> <li>○ Turn on main power and system control</li> <li>○ Launch printer interface software</li> </ul> </li> <li>2. <b>Visual Inspection</b> <ul style="list-style-type: none"> <li>○ Check for debris on table</li> <li>○ Ensure no obstructions on gantry path</li> </ul> </li> <li>3. <b>Ink Levels</b> <ul style="list-style-type: none"> <li>○ Verify sufficient ink levels</li> <li>○ Replace or refill if needed</li> </ul> </li> <li>4. <b>Vacuum System</b> <ul style="list-style-type: none"> <li>○ Turn on vacuum zones</li> <li>○ Confirm proper suction</li> </ul> </li> <li>5. <b>Printheads</b> <ul style="list-style-type: none"> <li>○ Perform nozzle check</li> <li>○ Clean printheads if necessary</li> </ul> </li> <li>6. <b>Environment</b> <ul style="list-style-type: none"> <li>○ Confirm temperature and humidity within recommended range (65-75 deg, 40-60 % humidity ideal)</li> </ul> </li> </ol>	Basic requirements to Ensure successful operation
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3	◆	Material / Machine Prep	<ul style="list-style-type: none"> <li>• Switch to Roll-to-Roll Mode within the Systems Operation Mode Tab by Unloading “Manual” mode (sheet fed) and Loading “Light RolltoRoll” mode. Ensure no error messages are present.</li> <li>• Check ink levels and refill if necessary.</li> <li>• Verify waste ink container is not full.</li> <li>• Inspect printheads for cleanliness.</li> <li>• Confirm pinch rollers and drive rollers are clean.</li> <li>• Ensure media roll is: <ul style="list-style-type: none"> <li>○ Correct width and weight for machine specs</li> <li>○ Free of damage, wrinkles, or edge defects</li> </ul> </li> <li>• Confirm core size compatibility (typically 3")</li> </ul>	Ensures successful quality / avoid head crashes
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4	◆	Loading Roll Media	<ol style="list-style-type: none"> <li>1. Load media roll onto the <b>supply shaft</b>.</li> <li>2. Lift and fasten web tension roller to upright position</li> <li>3. Secure front and back rolls evenly and lock into position by filling rod air bladder with air gun.</li> <li>4. Feed media over web roller and through print zone.</li> <li>5. Attach media to <b>take-up core</b>.</li> <li>6. Turn on Vacuum</li> <li>7. Engage <b>take-up and supply tension system</b> and ensure proper tension (default is 20% front and back).</li> <li>8. Align media edges using side plate-to-material edge measurement (front and back should be the same).</li> <li>9. Lower pinch rollers evenly across media width.</li> </ol>	Ensures a correctly aligned roll print
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5	◆	Setup	<ol style="list-style-type: none"> <li>1. Select or load correct <b>media profile</b> in RIP software.</li> <li>2. Set: <ul style="list-style-type: none"> <li>○ Resolution</li> <li>○ Pass count</li> <li>○ Ink density</li> </ul> </li> <li>3. Perform: <ul style="list-style-type: none"> <li>○ Nozzle check</li> <li>○ Head alignment (if required)</li> </ul> </li> <li>4. Adjust UV Lamp percentage according to pass count and material.</li> <li>5. Within the System Tab on the Bronco, ensure that the Unwinder and Rewinder switches are on. Next, turn on the vacuum. Then, engage the tension in the front and back. Enter values for each measurement parameter within the RolltoRoll Environment setup as well as the tension settings</li> </ol>	To make sure that the parameters of the operation match the job description
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6	◆	Print	<ol style="list-style-type: none"> <li>1. Confirm job parameters on printer interface.</li> <li>2. Send Job from the Ready que to the Print que by checking the box to the left and clicking the plus symbol at the bottom of the que</li> <li>3. Start print job by clicking the play button in the print que</li> <li>4. Monitor: <ul style="list-style-type: none"> <li>○ Media tracking (no skewing)</li> <li>○ Ink laydown quality</li> <li>○ Banding or streaking</li> <li>○ Take-up &amp; Supply tension</li> </ul> </li> <li>5. Make minor adjustments if needed during print.</li> </ol>	This is the actual print production process.
7	☑	Quality Check	<ul style="list-style-type: none"> <li>• Periodically check: <ul style="list-style-type: none"> <li>○ Print quality</li> <li>○ Ink levels</li> <li>○ Media alignment</li> </ul> </li> <li>• Stop immediately if: <ul style="list-style-type: none"> <li>○ Media shifts or wrinkles</li> <li>○ Head strike risk occurs</li> <li>○ Print defects appear</li> </ul> </li> </ul>	Quality Control
8	◆	Detach / Remove Printed Product	<ol style="list-style-type: none"> <li>1. Feed belt forward until 6 feet of blank roll material is visable</li> <li>2. Cut media cleanly from roll.</li> <li>3. Deflate air from take up rod and remove finished roll from take-up shaft.</li> </ol>	Printed roll will have to go on to next step in production workflow (lamine, cut, outside service etc.)

Notes: 😊

## **Routine Maintenance**

### **Daily**

- Wipe down surfaces
- Clean pinch rollers
- Perform nozzle check

### **Weekly**

- Deep clean printheads
- Inspect belts and rails
- Clean encoder strip (if needed)

### **Monthly**

- Inspect tension systems
- Check take-up motor function
- Verify alignment calibration

## Troubleshooting

Issue	Possible Cause	Solution
Banding	Clogged nozzles	Run cleaning cycle
Media skewing	Improper alignment	Reload media
Ink smearing	Incorrect curing	Adjust settings
Wrinkling	Improper tension	Adjust take-up tension

Definitions:

Revision History	Description of Changes	Requested by	Date
Rev 1	First posting to intranet		

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