



PRESSROOM EQUIPMENT AND SPECIFICATIONS

Print Trials

How to start a Print Trial:

1. Draft a trial plan and list of materials via email to: presstrials@clemson.edu.
2. We will be in touch with you shortly to finish developing your Trial Plan
3. Upon review, a cost estimate with options for press dates will be provided
4. Upon final confirmation of Trial Plan and press dates; Service, Equipment and Materials Agreements will be initiated through Clemson University.

The primary considerations for your print trial should be:

- What to test: which variable(s), if any, will be changed during the trial?
- Materials needed: how will substrate, ink, etc... be provided?
- What is the timeline of the project?
- What are the expected outcomes and goals?

Capabilities and Specifications:

Prepress

The Sonoco Institute is equipped with the latest software from Esko, including PackEdge, ArtiosCAD, Deskpack plug-ins, and more, as well as Adobe CC. Our workflow makes use of Esko Automation Engine using the Imaging Engine RIP software.

Plate Distortion Values

Repeat Length	Distortion
12 in.	96.75%
18 in.	97.84%
21.4022 in.	98.18%
22 in.	98.23%
26 in.	98.50%
32 in.	98.78%

Platemaking

An Esko CDI Crystal with the XPS LED exposure bed, as well as a Mekrom EVO 3A solvent processor allow us to image and process flexographic plates in house. Resolution options include 2400, 2450, and 4000 ppi.

Printing Plates Typically in Stock

Vendor	Material	Calipers
MacDermid	RAVE	0.067
	ITP 60	
Flint	ACE	
Dupont	DPR	
	EPR	
<i>Options listed are in-stock.</i>		
<i>Additional materials and calipers can be ordered upon request.</i>		

Mounting Tape (Stickyback) Typically in Stock

Vendor	Material	Durometer
3M	1020	Standard
	1120	Process
	1220	Light
	1320	Med-Soft
	1520	Med
	1720	Med-Firm
	1820	Firm
<i>Options listed are in-stock.</i>		
<i>Additional materials and calipers can be ordered upon request.</i>		

Press

Our Advanced Printing Technologies Lab houses an OMET 530 Varyflex 7 station servo press, and is equipped to print UV, water-based or solvent inks. Press speed ranges from 32 fpm to 600 fpm. Drying capabilities include UVHg & UVLED lamps, Hot Air (100°F - 250°F) and Hot Air Tunnel ($\leq 350^\circ\text{F}$).

Film Lamination with Printed Adhesive

Gravure

One gravure unit can replace Station 5 and eliminates the use of Station 6 as a flexographic printing station. We do not have gravure cylinder engraving capabilities in-house, but are happy to assist with any necessary arrangements.

Cold Foil

One cold foil unit can be inserted into station 6 and eliminates 1 flexographic printing station. Please note that this requires the previous station to be an adhesive station.

Rotary Screen

One rotary screen unit can be inserted, at any station, and eliminates 1 flexographic printing station. Please note that this requires additional setup and planning. Our screens and supplies are provided by Stork. Normal lead times are about two weeks.

Web Handling

Max Roll Weight	300 lbs. /roll <i>*If cores are vertical*</i>	Max. Roll (outer diam.)	40 in.
	500 lbs. /roll	Max. Width	20 in. <i>*See notes*</i>
Minimum Roll Requirement for	300 linear ft. per station	Core Size (inner diam.)	3", 6", or 8* in.

Core sizes above 6" limit web width to 16" max

	Microns	Inches	Points
Min.	12	0.0004	0.4
Max	610	0.4	24

Max Pallet Weight	2500 lbs.
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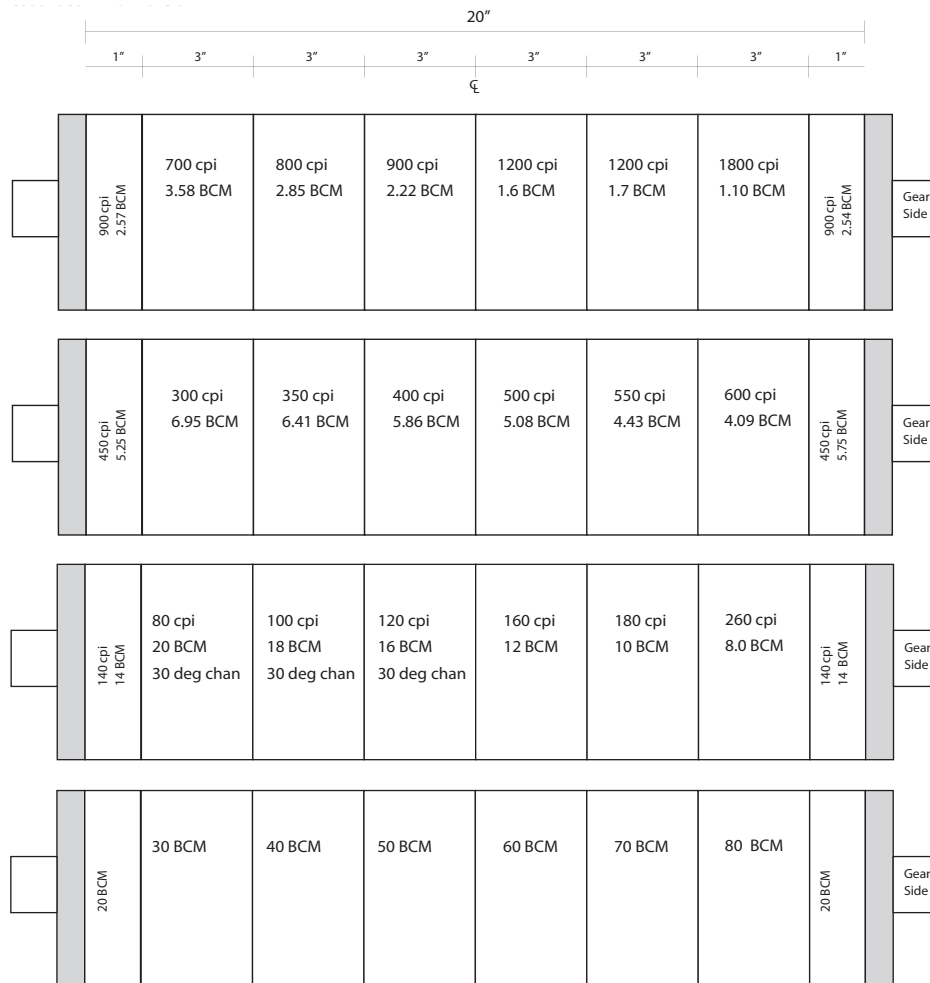
Rolls of substrate not adhering to weight and dimension guidelines will be charged at \$50 per roll plus additional handling charges.

Anilox Inventory

All anilox rolls are manufactured by Harper Corporation and utilize a 60° hexagonal engraving.

Qty	CPI	BCM	Cell Angle
1	1800	1.1	60° Hexagonal
4	1200	1.8	60° Hexagonal
3	900	2.2	60° Hexagonal
4	800	2.8	60° Hexagonal
4	600	4	60° Hexagonal
3	500	5	60° Hexagonal
1	240	8	60° Hexagonal
1	120	12.3	60° Hexagonal
1	160	15.2	60° Hexagonal
1	60	30	60° Hexagonal

Banded Anilox Inventory Diagrams



Inks and Coatings

Ink usage is dependent on cell volume of anilox to be used, type and duration of trial. Minimum amount of ink needed for a given trial is 1 gallon per station, depending on run length. A more accurate quote for ink quantity will be provided once an anilox choice has been finalized.

If planning to use conductive inks, special ink pans will be used to minimize ink usage to approximately 1kg.

When sending inks and coatings for trials limit total shipment to 55 gal., distributed into 8lb. containers. A Materials Transfer Agreement is required before shipment of any inks along with the corresponding MSDS sheet should accompany all ink and coating shipments.

- For solvent based inks and coatings, provide two weeks prior notice of shipment accompanied by the total volume.
- For water based and UV inks and coatings, provide one week prior notice of shipment accompanied by the total volume.
- Waste generated during trials will need to be sent back or billed back from Clemson.
- Cleaning of press rollers due to trials will result in additional charges, not previously included in quote.

Policies

1. Cancellation Penalty:

If reserved press date is cancelled or must be postponed for any reason by customer, a penalty of \$300 will be charge for within 10 business days of trial. Cancellations within 2 business days will be charged \$900.

2. Pallet Storage:

Due to limited storage, a fee of \$100 per pallet per month will be charged for pallets stored at The Sonoco Institute. Pallets arriving for a press trial should arrive no earlier than 2 weeks before a trial, and must be sent back no later than 1 week after a trial. Member companies will be allowed to keep 1 pallet in storage at no fee (additional pallets at the \$100 fee).

Shipping Addresses:

Smaller Shipments

(i.e. Inks, Plates, etc.)

Sonoco Institute of Packaging
ATTN: Pressroom
311 Harris A Smith Bldg
Clemson, SC 29634

Freight Shipments

(i.e. Rolls of Substrates)

Central Receiving
ATTN: Sonoco Institute of Packaging
108 Perimeter Rd.
Clemson, SC 29634

Standard Rates

- Press Rate - \$3,500/Day
- Platemaking - \$140/Hour (min. 3 hours)
- Prepress Services - \$140/Hour
- Materials Cost + 20%