

Sublimation Printing

and why Leesburg would like a new printing option

Problem & History:

- Many requests for sublimation printing in Leesburg
 - Messages
 - Comments
 - Survey Results
- Converted a printer that had been donated to Makersmiths
 - DIY/hobbyist solution
 - Spent the \$50 on ink and special cartridges, set up an area for everything, bought the paper and hoped for the best.
 - Did not work!
- Members still wanted Sublimation Printing!

Tools and Machines the Leesburg Committee Recommends:

- Sawgrass Brand Large Format Sublimation Printer: Model SG1000
- This is their mid size printer that comes with the capability of doing 11"x17" right out of the box, but can do 13"x19" or 13"x51" with the add-on tray, which we would like to purchase as well.
- The ink is easy to get since local craft stores all sell the smaller model, the SG500, and they use the same cartridges. It's also available on Amazon. Bonus: Can use store 25%-40% off coupons to purchase inks. The coupons are available weekly.
- You can also tile sheets if you would like to make a larger design. You don't see a seam. (Jessee's sister does this when making custom fabrics and can show examples)
- **Price: \$1,724.00** for a kit that includes double sized ink cartridges, remote training and installation, free shipping, software and more.
- [Johnson Plastics Kit](#)



Weight	64.090000
UOM	KIT
Brand	Sawgrass
Estimated Image Cost	\$0.63 / ft^2
High Speed Prints/Hour	158 @ 600 x 600 dpi
Maximum Resolution	4880 x 1200 dpi
Maximum Media Size	11" x 17"
Maximum Media Size with Optional Bypass Tray	13" x 51"

Tools and Machines the Leesburg Committee Recommends cont.:

- Sawgrass Brand SG1000 BYPASS TRAY
- This would allow is to use standard 13"x19" sublimation sheets (we already have 100 on hand) as well as 13" rolls of sublimation paper.
- **Price: \$214.00**
- [Johnson Plastics Bypass Tray](#)



Tools and Machines the Leesburg Committee Recommends cont.:

- Sawgrass Brand INK
- Having extra on hand so we don't need to scramble to order more.
- **Price: \$308**
- [Amazon Link](#)



Tools and Machines the Leesburg Committee Recommends cont.:

- VEVOR Heat Press 16x20
- This would allow is to fully accommodate the 13"x19" sublimation sheets without tiling. We currently own a 14"x14" press that could move to the new craft area in Purcellville if they would like it.
- **Price: \$323.00**
- [Amazon link](#)



Total Cost:

- Sawgrass Brand Large Format Sublimation Printer: Model SG1000
\$1,724.00
- Sawgrass Brand SG1000 BYPASS TRAY **\$214.00**
- Sawgrass Brand INK **\$308.00**
- VEVOR Heat Press 16x20 **\$323.00**

Grand Total Before Tax (Free Shipping from all sites):

\$2,569.00

Motion: Move to procure a dye sublimation printer consistent with configuration and accessories as outlined in the presentation for an amount **not to exceed \$2,800**, with the funds to come from the New Equipment Reserve.

Fees

- Time
 - \$7 for an ½ hour
 - Payback on equipment is 2-3 yrs at 10-15 uses per month
- Paper
 - \$1 a sheet/ 1 ft section of a roll
 - ~\$10 per 100 sheet cost, plus shipping and handling
 - Members can bring their own
- Ink
 - \$1 per sheet/ 1 ft section of roll
 - Cost is \$.63 per page in ink
 - Charge covers ink, shipping, and waste
- Classes
 - \$50 non-members
 - \$40 members
 - Covers cost of materials of \$2 and the rest is for maintenance and payback to the space

Payback for 1/2 hr of time

- 2-3 yr payback at \$7 for 1/2 hr of time
- Calculation:
 - $\$2,569 \text{ investment} / 24 \text{ month} / \$7 = 15.3$
 - $\$2,569 \text{ investment} / 36 \text{ month} / \$7 = 10.2$
- Chart shows how many 1/2 hr monthly charges are need to pay back the \$2,569 investment depending on price and years of payback.

	1yr	2yr	3yr	4yr
1/2 hr cost	\$214.08	\$107.04	\$71.36	\$53.52
\$3.00	71.4	35.7	23.8	17.8
\$4.00	53.5	26.8	17.8	13.4
\$5.00	42.8	21.4	14.3	10.7
\$6.00	35.7	17.8	11.9	8.9
\$7.00	30.6	15.3	10.2	7.6
\$8.00	26.8	13.4	8.9	6.7
\$9.00	23.8	11.9	7.9	5.9
\$10.00	21.4	10.7	7.1	5.4
\$15.00	14.3	7.1	4.8	3.6
\$20.00	10.7	5.4	3.6	2.7
\$25.00	8.6	4.3	2.9	2.1
\$30.00	7.1	3.6	2.4	1.8

Additional Information:

What exactly is sublimation? In scientific terms, Sublimation is the transition of a substance directly from a solid state to a gas state. It does not pass through the usual liquid state, and only occurs at specific temperatures and pressures. Unlike our Roland UV resin printer that prints on the surface, sublimation ink actually permeates the material.

Can you sublimate onto anything? For the best sublimation results, it is best used with polyester materials. It can be used with a range of materials that have a specialist polymer coating, such as those found on mugs, mouse pads, coasters, and more. In some cases, it is also possible to use sublimation on glass, but it needs to be normal glass that has been treated and prepared correctly with a specialist spray.

Another thing that makes it different from the Roland printer is it can print on round surfaces, as well as ones with handles or ones that are uneven sizes on top and bottom! Even with the rotary attachment on the Roland, you can only do evenly sized round pieces with no handles. Bonus: The Leesburg location already has several forms for a mug press that can accommodate tumblers, 11oz and 15oz mugs, shot glasses and pint glasses. There is also the option to add additional forms down the road.