PRINTER INVENTORY

(2) Durst Rho 312 UV cure roll-to-roll printers

- 3 meter wide printing
- 900 DPI; 12 picoliter drop size for super sharp images
- Spot gloss printing; double sided printing
- White over and under capability
- Swan certified and Greenguard approved 100% VOC free ink

Durst Rho P10-250HS UV cure flatbed printer

- 96” wide print width
- 1000 DPI; 10 picoliter drop size for super sharp images
- Rigid and flexible printing
- Spot gloss; white over and under capability
- Production speeds twice as fast as P10-250 without quality loss
- Swan certified and Greenguard approved 100% VOC free ink

Durst Rho P10-250 UV cure flatbed printer

- 96” wide print width
- 1000 DPI; 10 picoliter drop size for super sharp images
- Rigid and flexible printing
- White over and under capability
- Swan certified and Greenguard approved 100% VOC free ink

Durst Rho 800HS UV cure flatbed printer

- 96” wide print width
- Rigid and flexible printing
- Continuous printing
- White over and under capability
- Swan certified and Greenguard approved 100% VOC free ink

Durst Rho 500 UV cure roll-to-roll printer

- 5 Meter wide printing
- 600 DPI printing
- Single or multiple roll capability
- White over capability
- Swan certified and Greenguard approved 100% VOC free ink

Durst RhoTex 320R soft signage roll-to-roll printer

- 3 meter wide direct dispersement fabric printer
- 600 DPI
- 6 color textile printer
- Inks are water based and environmentally friendly
- Prints directly to fabric giving superior color saturation, rich blacks and sharp images
- Swan certified and Greenguard approved 100% VOC free ink

(2) HP Z6100 Aqueous Inkjet Printers

- 60” wide printing
- 1000 DPI
- Aqueous pigmented inks, 100% VOC free
- Used for high resolution printing on paper and canvas
- 8 picoliter drop size for super sharp images

Kern 400 Watt Laser Engraving System

- 60 x 120 cutting surface
- Utilized to etch, engrave and cut glass, acrylic, and wood
- Will also cut 1” acrylic with a polished edge

PRINT CAPABILITY

The characteristics of the end product drive our decision of which printer to use, with optimum image quality being the ultimate goal. Product characteristics that influence the decision of which printer to use are:

- Physical attributes
    - o Size
    - o Rigid or roll
    - o For textiles: soft sign/dye sublimation or regular UV ink
    - o Clear or opaque
    - o White media or colored base
    - o Natural light or backlit
- Image and graphic attributes
    - o Image detail – ultra-fine or standard resolution.
    - o PMS colors
    - o White ink: utilized as white ink over, white ink under or color/white/color (for day/night backlit)
    - o Spot gloss: we offer independent graphic element gloss ability
- Viewing distance of the installed product

Due to the equipment plan for our print facility and a diverse, modern fleet of state-of-the-art printers, Rainier has few limitations in selecting the right printer for the job. As a general statement, the only limitations we work around are:

- Size – single panel banners larger than 3 meters wide can only print on our Rho 500 (5 meters).
- Substrate – rigid substrates must be printed on one of our flatbed printers.

Unlike most shops, we have standardized all of our grand format printer purchases around a single vendor – Durst. Our relationship with them is so deep that we also function as their west coast demonstration facility. We print sales samples and graphics for their trade show booths. We chose Durst because their printers are the industry leader, delivering the best image quality, productivity, and reliability. Their printers are solid machines that are elegantly designed and engineered to the highest standards. They are the most expensive machines to purchase, which limits their appeal to commodity based shops, but provide the lowest lifetime cost of ownership when factoring in all the production variables.

Rainier invested over $2,000,000 upgrading our printer fleet to the latest in digital print technology. Our Durst printers are configured with all options, so they provide full redundancy.

To provide maximum creative flexibility and image quality, our printers have:

- Very fine drop sizes for ultra-high resolutions
- Complete white ink capabilities (white over, white under, spot white and color/white/color) to allow for printing on all surfaces and all lighting conditions
- Spot gloss capabilities
- Advanced, automated media transport system for precise registration on double-sided prints and on long production runs
- The most sustainable overall print technology in the world with no VOC inks and Greenguard certification. Durst has the most environmentally friendly ink on the market.
- Inks that have both a wide color gamut and the best adhesion capability in the industry

- Remote service monitoring using performance data to proactively predict service issues and schedule printer maintenance to coincide with planned production downtime
- The highest production speeds in their class

We are confident that our print quality and capabilities are competitive with any print shop in the world because of our investment in Durst technology.

Rainier follows G7 methods for profiling all printers and calibrates based upon our ISO 9001:2008 standards.

Based upon our ISO 9001:2008 standards, Rainier follows the manufacturer recommendations for calibrating all devices. We have set schedules for calibrating every device and send out devices to be tested and certified when applicable. Rainier follows G7 methods for profiling all printers. All monitors in the prepress department are calibrated monthly. We also update our profiles for each printer/substrate combination whenever a new print head is installed or whenever a weekly test print exceeds variation limits (typically a 4 Delta E). All maintenance and print head replacement procedures are performed by a Durst technician to ensure that our machines are always properly calibrated. We use a Barbiera Spectro LFP with Caldera's EasyMedia software to create our ICC profiles. Our spectrophotometer is sent in for calibration yearly. We also perform daily nozzle tests on each printer to ensure proper head alignment and calibration. These tests are mailed to the printer manufacturer weekly for verification.

Rainier's pre-press department has access to the entire Adobe Creative Cloud and whenever possible, we try to work with files in their native format. When saving a file for print, we follow our PDF-to-print workflow.

Electronic proofs are created for every job unless specified by the client. Physical proofs are only produced upon request. Sometimes an internal proof may be created to check resolution or color, but that is up to the designer. Certain jobs might be press checked by the designer before the final production run as well.

Rainier's formal Quality Management System has been certified to conform to the current ISO 9001 standards (presently 2015) since it was originally awarded in 2007, and our Environmental Management to the current ISO 14001 (presently 2015) since 2009. We are investigating AS9100 certification to meet the even more rigorous quality levels expected by our aerospace customers. We first received G7 certification in 2009 and are pursuing further color management this year by continued training of our own employees to G7 Expert levels, elevating our color and quality control knowledge.

MATERIALS

We have the ability to print on a multitude of materials. Our investment in UV printing technology allows us to print on almost any rigid or flexible material. The days of having to purchase materials only intended for the printing industry are over. We've created some of our most interesting print projects by experimenting with certain materials when a customer has asked whether or not we could print on it. We will attempt to print on any material, and with white ink in our printers, we aren't limited to white materials.

- Vinyl fabrics
- Mesh materials
- Polyester textiles
- Cotton
- Coated acrylic textiles
- Paper
- Cardstock
- Pressure sensitive vinyl and poly propylene
- Wallcovering
- Wallpaper
- Styrene
- Expanded PVC (Sintra)
- Expanded foam (Gator)
- Acrylic
- Glass
- Polycarbonate
- Rigid vinyl
- Cold rolled steel
- Hot rolled steel
- Aluminum
- Dibond
- Reclaimed wood
- MDF
- Plywood
- Veneer
- Magnet
- Receptive magnet
- Polyester adhesive materials

Below is a list of our most popular materials:
We pride ourselves on our ability to source the best quality products around. As a standard practice we do not buy based solely on price, as a result, our vendors present us with the highest quality products. As we source materials, we always try to find the most environmentally friendly option. All new materials are tested before we commit to purchasing or showing them to our customers. We test each material by printing on the same machines we would use during production. We finish and handle the material as if it were going to our customer. The material is only approved when everyone in the production line gives it a thumbs up. The quality checks continue for the life of the product at Rainier. We track the performance with a vendor management procedure within our Quality Management System. During quarterly Management Review meetings, if we feel that a particular material has been identified with systemic quality problems, we launch the process to source a replacement.

We have an environmental solution for every product we offer. We take pride in our initiative to respect and protect the environment. The materials that we use regularly and highlight for being green are:

- 3M Envision: non-PVC pressure sensitive film with non-PVC over laminate
- Yupo Jelly/Octopus: non-PVC window cling
- Reclaimed wood
- Polyester textiles – recycled through the domestic manufacturer from whom we buy directly
- Steel

- Aluminum
- Glass
- Wood
- Polypropylene fabrics
- Terralon wallcovering: non-PVC wallcovering
- 100% post-consumer recycled photo paper
- Paper
- Falcon board; Hexicomb
- Recycled news cardstock
- Acrylic – recycled through our vendor
- Polycarbonate – recycled through our vendor

We define value engineering as achieving the same, or similar, look as the originally designed product – but at a lower product or packing/shipping cost. Our value engineering is achieved in several ways that all can affect material selection.

- Material Substitution – In the case of material costs, many times a specific brand or part number is specified in the original design, but we are able to recommend a different or generic brand that costs less but retains the original design intent.

- Slight Sizing Modifications – Cost savings are often achieved by obtaining better material yield through optional sizes when ordering materials and/or size reduction of parts to allow for less material waste as parts are ganged up for production.

- Physical Weight Reduction – Every unnecessary pound in a product increases both the packing and shipping costs. Substituting lighter/thinner materials and/or re-designing parts to reduce weight help reduce the total weight.

- Dimensional Weight Reduction – All freight carriers bill by dimensional weight, so a large lightweight structure will cost more to ship than if the same structure could be broken down into smaller parts that are easily assembled on-site. We take this into consideration during production engineering.

- Expected life of product – A more expensive product that will last much longer may a better value. If the expected life of the products short, those improvements are not relevant.

FRAMING

Rainier has a complete wood shop in-house. We typically create rustic/reclaimed wood frames. We don't have a typical frame shop, but currently fabricate and stain the frames for framed art, wooden stretched canvas, floater frames, shadow boxes, and paper blocks. We commonly work with reclaimed Douglas fir, red oak, walnut, cherry, maple, and alder. Our metal shop creates frames used from some types of stretched canvas.

Our tolerances are +/- 1/16".

All hardwoods are finished with high quality stain and polished with two coats of clear matte lacquer. Wood frame moldings are manufactured from eco-friendly woods harvested from sustainable forests. Mat boards are industry standard 4 ply thickness and made from acid neutralized alpha-cellulose. Acrylic is crystal clear, impact and weather resistant, and UV stabilized to prevent yellowing. All framing components are designed to protect the art and exceed Rainier's product warranty of 5 years.

ORDER FULFILLMENT

We typically receive orders via email with links to the drawing sets, but they occasionally come in an email format.

Because we manufacture such a wide variety of products, this answer can vary dramatically between 1-5 weeks. We have manufactured extremely complex projects for Starbucks with lead times longer than 2 months. Just as often, we accommodate quick turnaround projects that are due as early as the next day!

Design lead-time can vary depending on the scope and novelty of the design. Production is generally 2 weeks, but grows with the complexity of the project or the addition of subcontracted work. We try to be extremely flexible and will work within the lead time our customer supplies.

Our design engineering department works daily with both 2D and 3D modeling software. We primarily use AutoCAD, SolidWorks, and SketchUp though we have experience with many others. Many of our customers send us CAD files that either go directly to CNC manufacturing or that need to be touched up by our drafters. We have even received 3D files from customers that can go directly to our Objet 30 3D printer for prototyping.

We haven't yet exported information to BIM software, but we are definitely up for the challenge! Our experience with the Autodesk suite of programs gives us the background needed to interface with our customers' files in any way they request.

RAINIER DISPLAY

Our formal Quality Management System is overseen by a Management Review Committee that is chaired by Scott Campbell, Rainier's CEO. Bruce Blunt is responsible for overall product quality. On the shop floor, each employee is directly responsible for the quality of the product they produce. We empower our employees to improve the quality of their processes daily and to "stop the line" to fix problems immediately, at their source.

The typical proofing process generally requires 1 – 2 rounds of color matching. On occasion, the process can go many rounds!

Standard program proofs are kept in archive storage until the program is canceled or until we get new printers. At that time, new proofs are run and color matched to the original approved proofs. Those proofs are then placed into archives while replacing the corresponding existing proofs. For custom jobs, physical proofs are stored up to 1-year and then discarded.

Most claims we get relate to freight damage or incorrect product, both of which occur immediately after delivery and are dealt with promptly. We have very few warranty claims related to your art program – generally a few each year. A few years ago, we had some adhesion issues with paper blocks that have been resolved. In addition, we have had some warping of oversized frames – we now have size limitations which have mitigated that issue.