

# Printing & Digital Cutting

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# Overview

This book overviews and links all the items to be trained on within printing.

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# Printing Technologies

## Solvent

### What is it?

Solvent ink is a dye based ink with a base of solvent. It works by the solvent eating into the material, being evaporated off by heat with the dye left behind in the material.

### What can you print with it?

Solvent inks are a very robust ink type. They can be used for any Roll to Roll media, though they provide poor colours on paper based media.

### Printers that use solvent ink in the building...

Matic Media currently do not operate solvent ink printers.

## Water Based

### What is it?

Water based inks are a dye based ink with a base of water, this means they are ecologically friendly as they are bio-degradable. They work by spraying onto a media, the water quickly evaporating off leaving the pigment in the media.

### What can you print with it?

Water Based inks tend to only work on paper based or treated plastic based medias.

# Printers that use water based ink in the building...

We have a small Canon printer that uses water based inks.

## Dye Sublimation

### What is it?

Dye sublimation is a water based ink that uses heat transfer to transfer pigment to polyester based materials through either a fixation unit or a paper based transfer via a sublimator or a heat press.

### What can you print with it?

Polyester based fabrics.

# Printers that use dye sublimation in the building...

The [Mimaki TX300 mkii](#) uses dye sublimation based inks.

## UV Ink

### What is it?

UV ink is a UV curable ink system which remains liquid until cured with a UV light source. It uses the same technology as white fillings used in dentistry which you may be familiar with. As it is a dry ink system (it instantly dries when cured) it can be used in Roll to Roll and Flatbed printing operations.

### What can you print with it?

Any rigid or flexible material. Some materials require a primer for the ink to "Stick" to the material before printing.

## Printers that use UV ink in the building...

- [Canon Colorado 1650](#)
- [Canon Arizona 660XT](#)
- [Mimaki UJV-55-320](#)

# Printers

## Printers

### Arizona 660XT Flatbed Printer

1. Machine Overview
2. Health and Safety Overview
3. Roll to Roll Unit
  1. Loading Material
  2. Unloading Material
  3. Printing a Nozzle Check
  4. Adding a New Material
  5. Calibrating Feed Rate
  6. UV Lamp Temperature
4. Flatbed Operation
  1. Loading Material
    1. Masking Areas
  2. Vacuum Areas
  3. Measuring the Head Height
  4. Printing a Nozzle Check
  5. Printing Rulers
5. Operating Panel - General Usage
  1. Viewing Jobs
  2. Viewing Print Layers
  3. Position Jobs
  4. Creating Batch Jobs
    1. Sequential
    2. Collated
  5. Printing a Nozzle Check
  6. Printing on the Roll to Roll Unit
  7. Printing on the Flatbed
  8. Pausing Jobs
  9. Cancelling Jobs
  10. Deleting Jobs
6. Operating Panel - Administrative Usage
  1. Setting Network Address
  2. Bulk Deleting Jobs

3. Outputting Maintenance Logs
4. Accessing Special Print Files
5. Accessing Usage Counters
7. Double Sided Printing
8. Maintenance
  1. Changing Ink Bags
  2. White Ink Agitation
  3. Head Cleaning
  4. Ink Filter Changing
  5. Print Head Filter Changing
  6. Changing the Lamps
  7. Daily Maintenance Procedure
  8. Weekly Maintenance Procedure
9. Troubleshooting

# Canon Colorado 1650

1. Machine Overview
2. Health & Safety Overview
3. Printer Operation
  1. Loading Media
  2. Loading Reversed Rolled Media
  3. Loading Media for Double Sided Printing
    1. Side A Loading
    2. Side B Loading
  4. Pickup Roll Loading
  5. Feeding Media into the Printer
  6. Choosing an Output Method
4. Advanced Usage
  1. Calibrating Media
5. Operating Panel - Administrative Usage
  1. Setting Network Access
  2. Accessing Usage Counters
6. Double Sided Printing
7. Maintenance
  1. Changing Ink Cartridges
  2. Printhead Cleaning
  3. Printhead Nozzle Check
  4. Printhead Optimisation
  5. Manual Printhead Cleaning
  6. Changing Air Filter
  7. Changing Waste Ink Container
8. Troubleshooting

# Mimaki UJV-320

1. Machine Overview
2. Health & Safety Overview
3. Printer Operation
  1. Loading Media on the Front Roll
  2. Loading Media on the Back Roll
  3. Dual Roll Media Loading
  4. Setting The Head Height
  5. Choosing Media Setup
  6. Y Feed Rate Calibration
  7. Setting the X Dot Positioning
  8. Printing a Nozzle Check
4. Operating Panel - Administrative Usage
  1. Setting Network Access
  2. Accessing Usage Counters
5. Maintenance
  1. Changing Ink Cartridges
  2. Automatic Printhead Cleaning
  3. Manual Printhead Cleaning
  4. Changing Waste Ink Container
  5. Changing Ink Container
  6. Changing Printhead Wiper
6. Troubleshooting

# Mimaki TX300p mkII

1. Machine Overview
2. Health & Safety Overview
3. Printer Operation
  1. Loading Media with Pickup
  2. Loading Media without Pickup
  3. Cleaning the Ink Trough
  4. Setting The Head Height
  5. Choosing Media Setup
  6. Y Feed Rate Calibration
  7. Setting the X Dot Positioning
  8. Printing a Nozzle Check
4. Operating Panel - Administrative Usage
  1. Setting Network Access
  2. Accessing Usage Counters
5. Maintenance
  1. Changing Ink Cartridges
  2. Changing Printhead Cleaning Solution Cartridge

3. Automatic Printhead Cleaning
4. Manual Printhead Cleaning
5. Changing Waste Ink Container
6. Changing Printhead Wiper
6. Troubleshooting

# Printing Finishing Equipment

## Roll Lifter

1. Machine Overview
2. Health & Safety Overview
3. Standard Operation
4. Troubleshooting

## Transmatic TFIX 200 - Fixation Unit

1. [Machine Overview](#)
2. [Health & Safety Overview](#)
3. [Standard Operation](#)
  1. [Load Cores on to Front and Back Spool Bars](#)
  2. [Load the Material into the Fixation Unit](#)
  3. [Set the Temperature](#)
  4. [Turn on the Extractor Unit](#)
  5. [Feed Material Through Fixation Unit](#)
4. [Maintenance](#)
5. Troubleshooting

# Rip Software

## Onyx Thrive

1. Software Overview
2. Printer Profile vs Colour Profile
3. Standard Operation
  1. What are Presets
  2. Opening Files
    1. Selecting the Printer
    2. Enter Quantity
    3. Choosing Preset
    4. Choosing Scale
    5. Choosing Rotation
  3. Opening Multi-page Files
  4. Changing Print Job Printer Settings
  5. Printer Jobs Screen
    1. Changing Job Order
    2. Quick Rotating
    3. Deleting Files
    4. Placing Jobs On Hold
  6. Print Job Screen
    1. Adding Crop Marks
    2. Rotating
    3. Scaling
    4. Job Labels
  7. Printing with White Ink
  8. Setting the Media Size on the Printer
  9. Sending Files to the Printer
    1. Print Individually
    2. Converse Media
    3. Group Jobs
4. Using the Preflight Tool
  1. Cropping
  2. Scaling
  3. Tiling
  4. Adding Bleed
  5. Switching Pages
  6. Changing Quantities
5. Advanced Operation
  1. Software Installation

2. Adding Printers
3. Editing Printers
4. Changing Number of Rips assigned to a Computer
5. Editing Presets
6. Creating Presets
7. Adding Cutters
8. Downloading Media Profiles
9. Editing Media Profiles
10. Colour Profiling Media
  1. Load xRite System
  2. Set Ink Limits
  3. Scan Ink Limits
  4. Scan Profile
  5. Generate CMYK Reference Panel
6. Troubleshooting

# Rasterlink

1. Software Overview
2. Standard Operation
  1. What are Presets
  2. Opening Files
    1. Selecting the Printer
  3. Changing Print Job Printer Settings
    1. Print Profile & Quality
    2. Cropping
    3. Tiling
    4. Position Jobs
  4. Merging Jobs Together
    1. Positioning Jobs
  5. Setting the Media Size on the Printer
  6. Sending Files to the Printer
    1. RIP Only
    2. Rip and Print
    3. Print Only
3. Advanced Operation
  1. Software Installation
  2. Adding Printers
  3. Editing Printers
4. Troubleshooting

# Digital Cutters

## Summa Plotter

1. Machine Overview
2. Health & Safety
3. General Operation
  1. Loading Material
  2. Setting the Knife Pressure
  3. Preforming a Test Cut
  4. Changing the Plotting Speed
  5. Weeding
  6. Opus Operation
4. Summa Cut Centre
5. Onyx Cut Centre
6. Maintenance
  1. Changing the Blade
  2. Cutting Belt Changing

## Zund Digital Cutter

1. Machine Overview
2. Health & Safety
3. Tools & Material Usage
  1. UCT
  2. KCT
  3. POTS
  4. VCUT
  5. ROUTER
  6. CRT
4. Blades and Consumables
5. General Operation
  1. Changing Tools
  2. Using the AKI
  3. Manually Setting the Blade Depth
  4. Preforming a Test Cut
  5. Loading Files
  6. Setting Origin Point
  7. Changing Vacuum Pressure
  8. Toggle Automatic Vacuum Mode

- 9. Cut from the Back Operation
- 10. Automatic Registration Reading
- 11. Manual Registration Reading
- 6. Advance Usaged
  - 1. Adding Hot Folders
  - 2. Changing White Point on Camera
  - 3. Adding / Removing Points
  - 4. Insetting / Offsetting Cutter
  - 5. Engraving - Pockets
  - 6. Adding / Removing Bridges
  - 7. Waste Outside / Waste Inside
  - 8. Changing Cut Order
  - 9. Importing Cut Files into Existing Cut Files
- 7. Maintenance
- 8. Troubleshooting

# Fotoba XY Cutter

- 1. Machine Overview
- 2. Health & Safety
- 3. General Operation
- 4. Maintenance