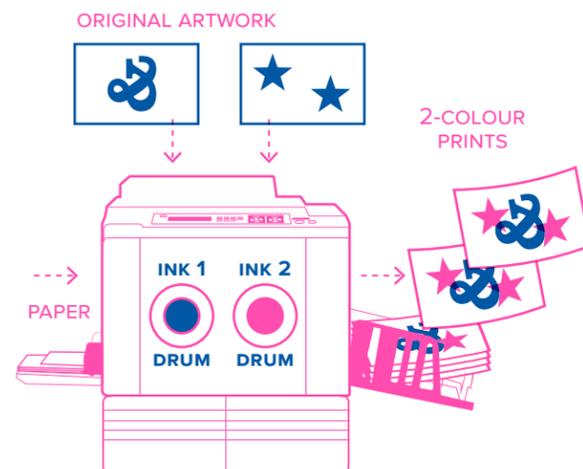
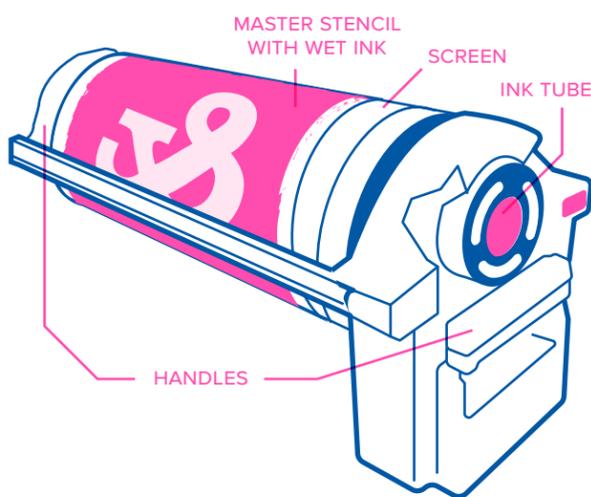


# What's a Risograph?

- It's a spot colour process, which allows us to use ink colours that are impossible in CMYK printing
- Designed to be cost-efficient for high quantities of limited colour graphics
- It's like a combination of screen printing, stencil printing, and photocopying
- First introduced in the 1980s, and now popular with artists and designers for its unique look
- Inks are soy or rice based

## RISO DRUM



## MASTER MAKING AND PRINTING

The machine burns the artwork for each colour onto a roll of special master paper, and attaches the master sheet to an ink drum. The previous master is discarded: they're not reusable.



The drums rotate as paper is passed through the machine, making a print impression on each sheet. A two colour print means an impression from drum 1 first, then drum 2 second.

## PAPER

- ✓ **Must be uncoated.** It needs a natural surface to absorb the ink. Nothing glossy or shiny.
- ✓ **Weight** roughly between 20# bond and 80# cover (that's 75 – 216 GSM)
- ✓ **Sizes:** We print on Letter (8.5x11") and Tabloid (11x17")  
Tabloid size paper is a more efficient use of the master stencil area.
- ✓ **Studio paper:** COMD studio has a variety of papers available for shared use and purchase. Personal paper must be approved by technician.
- ✗ **No holes, rips, rough edges, folds, or staples**

## IDEAL RISO PROJECTS

- ✓ **Lots of copies of the same print,** or multiple copies of the same print on different types of paper
- ✓ Simple limited-colour graphics
- ✓ Relatively light ink coverage
- ✓ Designs that don't rely on being perfect, and are forgiving about consistency and alignment



# Planning Riso Artwork

**VALUE** The range of value (light to dark) in the original becomes ink density

100%	90%	80%	70%	60%	50%	40%	30%	20%	10%
100%	90%	80%	70%	60%	50%	40%	30%	20%	10%

- Since the Riso prints by allowing ink through tiny holes burned in the master sheet, lighter shades don't appear as solid light tints – they print with a visible pattern or texture.
- Try to get a good result with the lightest possible ink, especially on thin paper. Heavy ink takes longer to dry, it can smear or warp the paper, and it can even get stuck to the drum and jam in the machine.

- Using grays instead of 100% black can result in cleaner, faster drying prints, but type and lines usually have the clearest, crispest edges at 100%
- The look of each ink in the final print depends on:
  - The values in your file:** for grayscale, or each spot colour swatch, 0% is white/paper colour, and 100% is the maximum darkness/solidity.
  - The print settings for the machine:** It's a good idea to talk to the technician about how to get the result you want, whether you're bringing in artwork for tech printing, or doing the printing yourself.

## BASIC RISO PREPARATION

Multi-ink prints need a **colour separation** to determine which parts print with which ink

### 1 Colour

- ✓ A black & white or grayscale version of the artwork  
*Yes, it's that simple: like making copies, but you get to choose the ink colour.*

### 2+ Colours

- ✓ A black & white or grayscale separation for EACH ink colour
- ✓ Or: a file where the parts that are meant to print with each ink are consistently assigned to ink swatches (Pantone/spot colours, or C, M, Y, or K)

## imperfections

...are part of the Risograph process!

- Copies of the same print won't all look identical
- Small shifts in alignment/registration are common
- Marks and smears can happen, especially with multiple passes through the machine. The most dangerous areas on the paper for marks are: the top edge (first that goes into the machine), and about an inch all the way down the center (in the same direction the paper goes into the machine)
- Solid areas of colour won't look consistently flat. Texture and variation will usually be visible.
- Lighter shades of each ink will always look textured or patterned, because it's a stencil process.

## INK COVERAGE

Try to use paper colour, not ink colour for solid backgrounds



### NOT GOOD FOR RISO

Large solid areas of colour print unevenly, and can smear or cause paper jams



### BETTER FOR RISO

Relatively light ink coverage. There's more paper showing than ink.

**PRINT MARGINS:** The Riso can't print all the way to the edge (margin of about 0.25" on all sides)

## DRYING

- The ink comes out wet, and **prints MUST be left to dry at least overnight** before a second pass through the machine (for double-sided or 3+ colours), or handling for folding/binding/trimming. It can take 2 or 3 days to reach maximum dryness.
- **Do not touch wet ink**, on fresh prints or master sheets. If it gets on your skin, wash with soap + water  
**Gloves recommended** (provided in studio) for handling new prints with heavy ink coverage.
- Riso prints are like newspaper ink: even after they're dry, it can still be possible to smudge them. Avoid really heavy ink on high-touch pieces like book covers, or consider spraying them with clear fixative (the same kind that you can buy at art stores for charcoal or pastel drawings – needs to be done in one the school ventilation booths, not in the studio.)
- Marks can often be cleaned up with an eraser.