SWELL FORM TACTILE GRAPHICS

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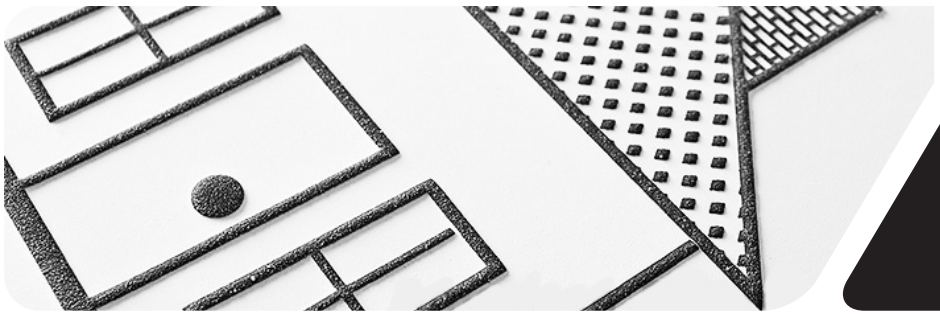


Speci cations, Safety Information Troubleshooting

Swell Form Specifications

Size: 50 x 12 x 16cm (no tray), 50 x 12 x 19cm (tray fitted)
Weight: 6 kg/13lbs
Color: Black
Ambient Operating Temperature: 5 - 35°C or 41 - 95°F
Power: 240V AC 5A 50Hz
110V AC 12.5A 60Hz
Lamp Power :1000W (1Kw)

Safety Information

General

- The Swell Form machine should only be operated in well ventilated areas.
- When the machine is used in accordance with the instructions contained in this manual, the machine is a Class A, CE approved device, and complies with safety standards.
- Use the machine in the correct position, i.e. the fans on top and the power cord at the rear. Do not block any fans/cooling vents.
- Leave adequate space in front and behind the machine for paper entry and exit.
- Unauthorized modifications to this machine should not be done without supplier and/or manufacturer approval.
- Warnings and safety labels must be kept legible.
- The heat lamp is bright - do not look directly at it while it is in operation.
- Avoid any operational action that may cause a hazardous situation.

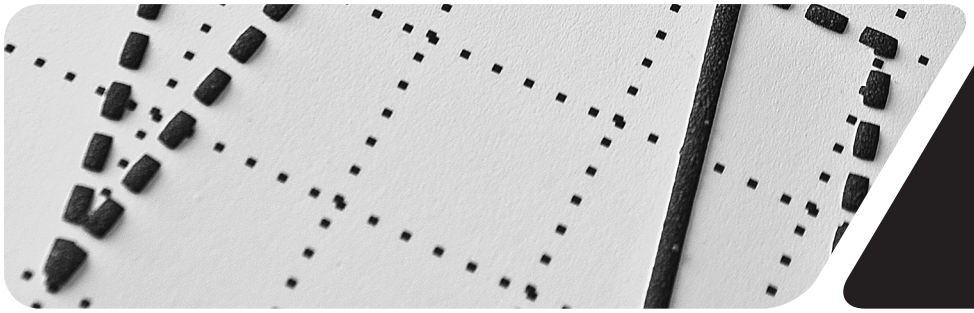
Electrical

- Check that the power information listed on the Swell Form machine serial label is suitable for use in your country before plugging it in.
- In case of an electrical fault, disconnect the machine from the power cord and refer to the supplier.
- The machine must be grounded.

Troubleshooting

On/Off Switch does not illuminate:

- Confirm that it is plugged in correctly (both the cable into the machine and into the wall).
- Confirm that the electrical socket is getting power.
- Check/replace fuse located below the power cord receptacle.



Troubleshooting Continued

Machine has power but does not accept paper:

- Check that you are feeding the paper into the correct slot. This will be the slot with the paper tray affixed to it.
- There is a safety shut-off feature which ensures the lamp turns off if the paper jams. The machine will then emit two beeps every two seconds.
- If the machine emits a continuous series of bleeps, please contact your supplier, or the manufacturer.

Most apparent faults occur due to operator error, therefore please read the instructions carefully. If in any doubt please contact your supplier, or the manufacturer.

Machine appears to operate normally, but paper not passing through machine:

- A common mistake is trying to put the paper into the exit slot. Try the other side, where the paper tray is affixed, and re-read all of the operating instructions.
- Make sure the paper is flat on the infeed tray and push it firmly into the machine towards the rollers.

Paper constantly jams in machine:

- Ensure paper is flat when entering the machine, and that any curl or bent edges have been reduced.
- The temperature of the machine is set too high, making the paper curl during processing.
- The diagram has very large solid black areas close to the edges of the page making the paper curl during processing.
- Roller fault - please contact your supplier.
- Do not feed paper through the machine more than 3 times.

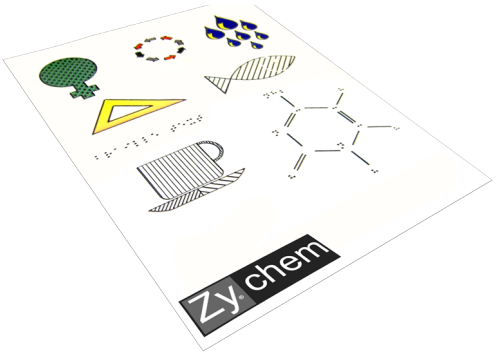
Paper does not pass smoothly through the machine, or the machine stops for no reason:

- The drive belt may have become loose or lost the correct tension - please contact your supplier.

SWELL TOUCH PAPER

What is Swell Touch Paper?

Swell Touch paper is a highly specialized paper onto which images can be printed/drawn, heated and then made into tactile diagrams.



The Swell Touch paper is made up from a backing paper with a proprietary coating that reacts with heat and carbon. Once an image has been put onto the paper, it is ready to become tactile.

When heated under the lamp of the Swell Form machine, a physical reaction takes place between the carbon in the ink, and the coating on the Swell Touch paper. During this process the black lines will swell and the image can then be felt.

Swell Touch Paper Specifications:

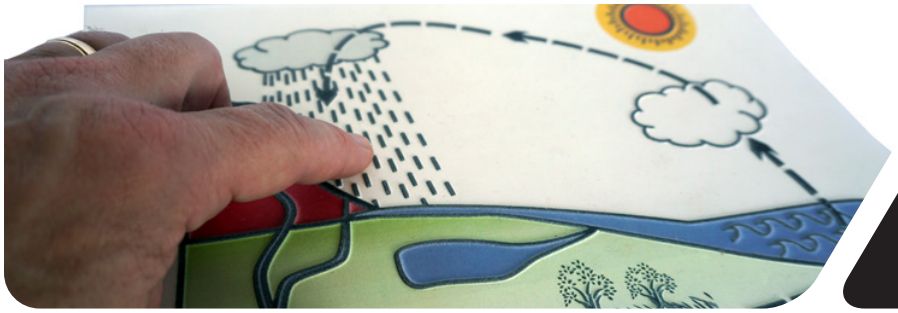
Weight: 195gsm ± 5gsm
Thickness: 0.25mm
Expansion Temp.: 110° C (overall) and 85° C (printed with carbon black)

What is a Tactile Diagram?

A tactile diagram is an image which can be felt by the fingers by blind and visually impaired users. Using the Swell Form machine with Swell Touch paper is one of the easiest ways to quickly produce high quality tactile diagrams.

A diagram can be produced in various ways:

1. Freehand drawing with a Swell Touch marker, a 2B pencil or charcoal.
2. Photocopied from a book onto plain paper, amended, and then photocopied onto the Swell Touch paper.
3. Created in a computer program and printed onto the Swell Touch paper.
4. Scanned from book to computer, amended, and then printed onto the Swell Touch paper.

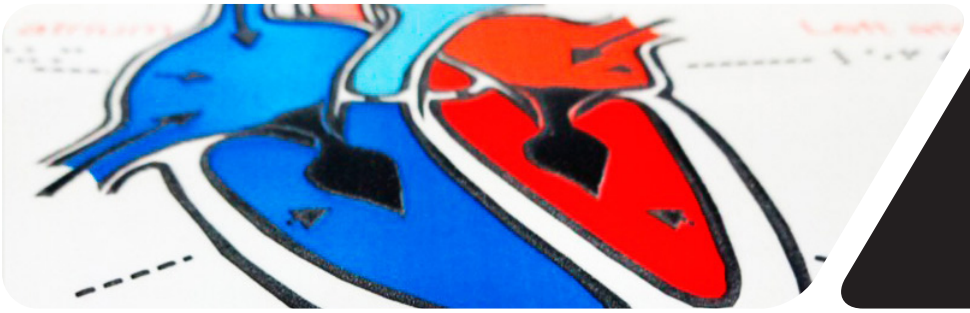


TACTILE DIAGRAM TECHNIQUES

Techniques To Create Effective Tactile Diagrams

Keep it simple!

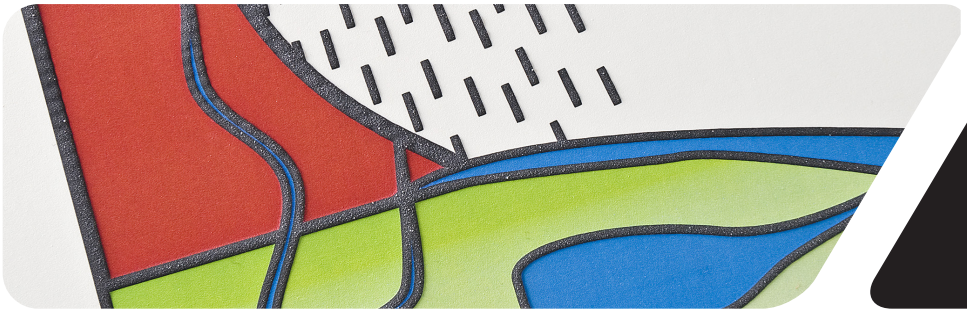
- Consider the ability of the visually impaired reader. The diagram must match their abilities. If there is too much information on the paper (too many lines, dots and/or raised areas in a small space), it will become confusing.
- When starting, test a variety of samples with the reader. This will establish some parameters on what the specific person can understand.
- Try a variety of drawing programs on the computer. You may find one is better than another for creating effective shapes/textures for tactile diagrams. You can also visit the Tactile Library to download free art for printing at www.tactilelibrary.com.
- White correction fluid can be used to modify the original image/diagram, which can then be copied onto Swell Touch paper.
- Try to keep lines of a similar thickness. This helps to make the diagram swell uniformly.
- Try to use blocks of texture rather than blocks of solid black. Different textured areas can better represent different concepts.
- Braille has to be font size 24 and at least 1.5 spacing to make it legible for visually impaired readers.
- Remember that the black will swell, while the colors will not.



PHOTOCOPYING & PRINTING

Photocopying/Printing onto Swell Touch Paper

- The faster and cooler the copier, the better.
- Fan the Swell Touch paper on all four sides before putting it into the photocopier or printer. This separates the paper and makes it easier for the photocopier/printer to pick up one sheet at a time.
- Always run a single test sheet first, and preferably through the bypass tray. Using the bypass tray minimizes the route through the photocopier/printer, as it is shorter, and therefore cooler.
- If possible, check if the photocopier/printer can pick up the paper from its shortest edge. This can prevent the paper curling around the rollers.
- If the copier has a setting for transparencies or acetates, use this setting with the Swell Touch paper. Do not put a photocopier/printer on the setting for 'thick paper'.
- Allow the copier to cool for a few minutes after its previous job before using Swell Touch paper.
- You can also ask your photocopier technician to lower the temperature of the photocopier/printer down to 180°C. This can usually be done with all machines.
- Make sure the collection tray does not become congested when using Swell Touch paper. The tray may fill faster than expected due to the thickness of the paper.
- Do not leave the photocopier/printer alone while it is producing the diagrams.
- We recommend letting the ink dry for a short period of time when using inkjet photocopiers/printers.



Prologue

Thank you once again for purchasing the Zychem Swell Form machine. We welcome you to the community of tactile graphics producers using our products since 1991. Our community's feedback is highly valuable to us, as it allows us to improve our products and customer service. We invite you to provide any feedback that you have for us.

If you need more information or assistance not offered in this guide, please contact us via email at sales@zychemltd.com