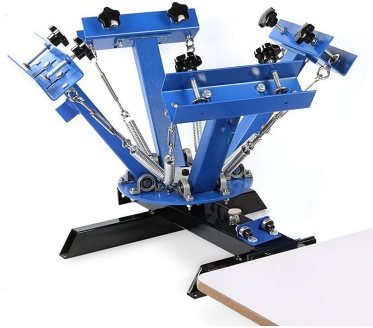


# How to use a Screen Printer



Youth Leadership Institute



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# What is Screen Printing?

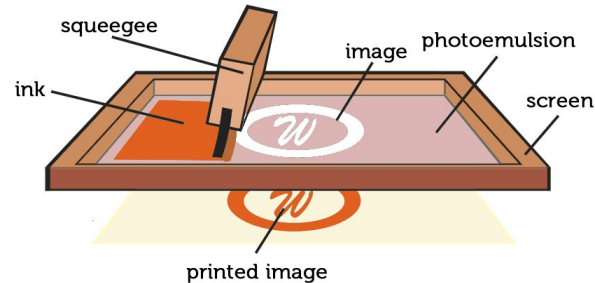


Originating from the latter half of the 1st century, China.

Screen printing was traded to Europe via the famous silk road.

A stenciled design is transferred to fabric using a mesh screen, ink, and squeegee.

Andy Warhol used screen printing in some of his art. notably "Marilyn Diptych."



# What you Will Need



## Equipment

- a. Speedball Screen Printing Screen
- b. Squeegee
- c. Rotary Screen Printing Machine

## Materials

- a. Speedball DIAZO photo emulsion kit OR Ecotex emulsion
- b. Color Ink
- c. Masking Tape
- d. Grafix acetate film

# Mesh Screens



Whether you buy a wooden or metal framed screen, take note of numbers on the edges of the frame.

A number indicates the mesh count. A higher number means a finer mesh.

Stick with a mesh count that ranges between 100>150>200



# Designing a Pattern and Choosing a Screen



**Step 1:** Create a design and print it out onto a transparent acetate film. This film will be used to create a stencil.

**Step 2:** Choose a mesh screen to suit the complexity of the design, generally speaking the mesh should be between 100 and 200, this number can be found on the corner of the screen frame.



# Hardening the Emulsion Layer



**Step 1:** Coat the screen with a layer of light reactive emulsion.

**Step 2:** Lay the the acetate sheet featuring the design onto the emulsion-coated screen. Expose both the acetate and emulsion to a bright light. The light hardens the emulsion, so the parts of the screen which are covered by the design remain in liquid form.

**Note:** If the final design is going to include more than one color, then a separate screen must be used to apply each layer of ink. To create multi-coloured products, design each stencil and line them up perfectly to ensure the final design is seamless.



# Preparing the Stencil



**Step 1:** The emulsion is washed off. The areas of the screen not covered by the design will have hardened from the light. Any unhardened emulsion is then rinsed away. This leaves a clear imprint of the design on the screen for the ink to pass through.

**Note:** Do not drain emulsion down a sink without first placing a drain filter.

**Step 2:** The screen is dried and the stencil is now ready to be used for printing.





# Applying Ink



**Step 1:** The fabric or garment being printed is laid down flat onto the printing board, underneath the screen. For multicoloured prints, rotary presses can be used to apply separate color layers in quick succession.

**Step 2:** The screen is lowered down onto the printing board.

**Step 3:** Ink is added to the top end of the screen, and a squeegee is used to drag the ink along the full length of the screen. This presses the ink through the mesh and onto the open areas of the stencil.

**Note:** If the printer is creating multiple items, then the screen is raised and a new garment is placed onto the printing board. The process is then repeated.



# Completion and Cleaning the Equipment

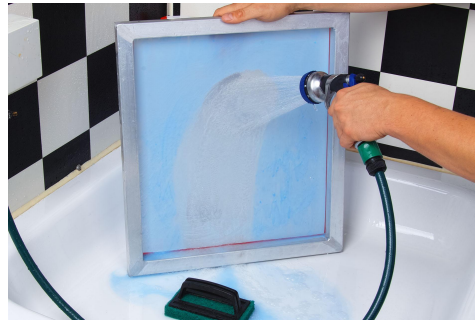


**Step 1:** The product is dried, checked and finished.

**Step 2:** The printed product then passes through a dryer, which cures the ink and creates a smooth finish.

**Step 3:** The screen is removed and emulsion washed off with strong soap and degreaser.

**Note:** Do not drain emulsion down a sink without first placing a drain filter.



# Photo List



Instructional Source: <https://www.customplanet.co.uk/what-is-screen-printing-a-step-by-step-guide>

Photo Links: <https://m.media-amazon.com/images/I/71HeGHB-jML.jpg>

<https://www.sunrise-metal.com/wp-content/uploads/2020/12/Fig2.-Silk-screen-process.png>

<https://m.media-amazon.com/images/I/612czPu+aoL.jpg>

[https://cdn11.bigcommerce.com/s-55678/images/stencil/1280x1280/products/5873/9590/ogr4tpnakk9gifdgldz\\_95910.1578387613.jpg?c=2](https://cdn11.bigcommerce.com/s-55678/images/stencil/1280x1280/products/5873/9590/ogr4tpnakk9gifdgldz_95910.1578387613.jpg?c=2)

<https://m.media-amazon.com/images/I/71BY5F33ZXL.jpg>

<https://www.siebdruck-versand.de/images/siebdruckversand-ultrastip-siebrahmen-entschichten-4.jpg>

[https://marathonsportswear.net/wp-content/uploads/2018/09/MS\\_APR\\_041018-1200x423.jpg](https://marathonsportswear.net/wp-content/uploads/2018/09/MS_APR_041018-1200x423.jpg)

<https://www.macrokun.com/uploads/allimg/180129/how-to-clean-screen-printing-screen.jpg>