

# PHOTOSHOP FOR SURFACE DESIGN – REPEAT

## Fixing the repeat with Offset

This technique suites best for all-over surface sketches, or even for designs, which are already made in repeat by hand

**Crop the sketch so that it could work as a repeat** (e.g. using the repeat size in W x H x Resolution). Edges of cropped repeat can be sharp (2A), OR you can include elements continuing outside the edges (1A)

Do **Filter -> Other -> Offset**. Tick Wrap Around. Move the repeat line by dragging the horizontal and/or vertical sliders (1B,2B)

## Tools for fixing the repeat lines

Clean the cut repeat lines. Several tools can be used:

If you did not cut the edges of repeat sharp: Delete the background of design. Select one side of the design and cut it on a new layer (layer -> new layer via cut) Move the edges of repeat to overlap. (1C) Use f.eg eraser to work with the repeat. Flatten the image (Layer -> Flatten image) and trim the edges: Image -> Trim

If you cropped the edges of repeat sharp, you can simply paint, or copy, paste and move elements in the design to cover the repeat-line. Alt-drag to duplicate elements quickly

You can of course add new elements in the design: Open images (delete their background) and drag or copy and paste them in the design

With **Clone Stamp** you can paint with your own design. Select the point to be used as clone source by Alt-clicking. **Healing brush** works in similar way, but it tries to match new painting seamlessly into image

**Spot Healing Brush** works also in similar way, but you don't define the clone source by yourself. Brush automatically samples it from around the area you are painting with it

- o Type Content-Aware

**Patch Tool** is similar to the Healing Brush Tool, in that it matches the texture, lighting and shading of the sampled pixels to the source area, but the Patch Tool uses selection-defined areas instead of a brush

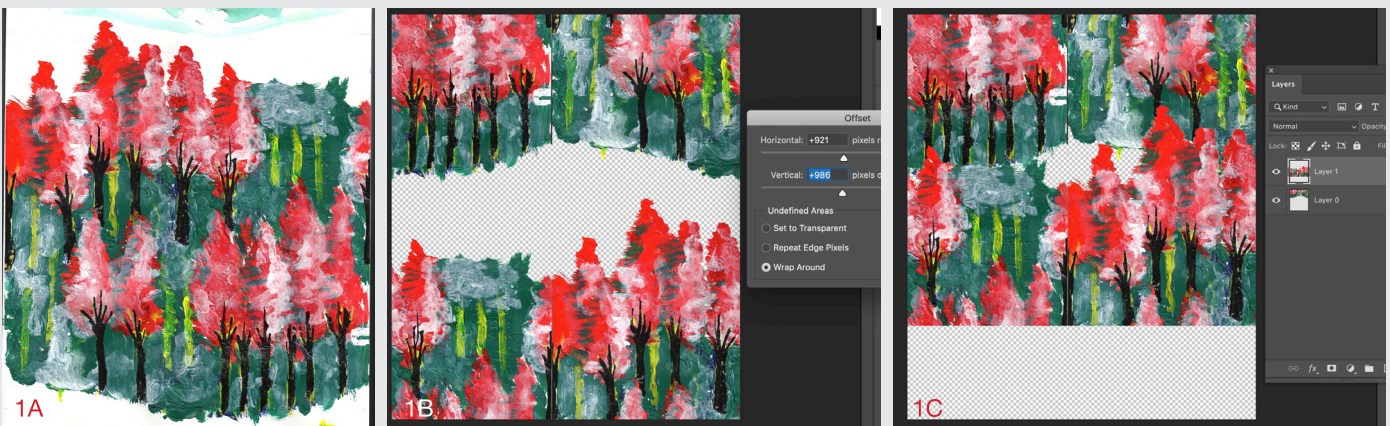
With **Content-Aware Fill** you can fill with contents of your own design. Photoshop automatically samples the fill content from around the selection: **Select an area to fix**. Select the area around repeat line with e.g. Lasso tool. Do **Edit -> Fill, Use: Content-Aware**

- o It is better to select small areas and do Content Aware Fill several times when fixing e.g. a repeat line

When working with reduced amount of colors, note that Clone stamp, Healing brushes and Content-Aware Fill add more tones of color into design. Healing brushes or Content Aware Fill do not function in Indexed colors – mode

You can of course use layers, but note that you need to offset the layers one by one (If you would like to offset several layers at once, you would need to convert them into Smart Object first OR merge the layers before offset)

Check the size of the repeat: Image -> Image Size. Change if needed (2C)



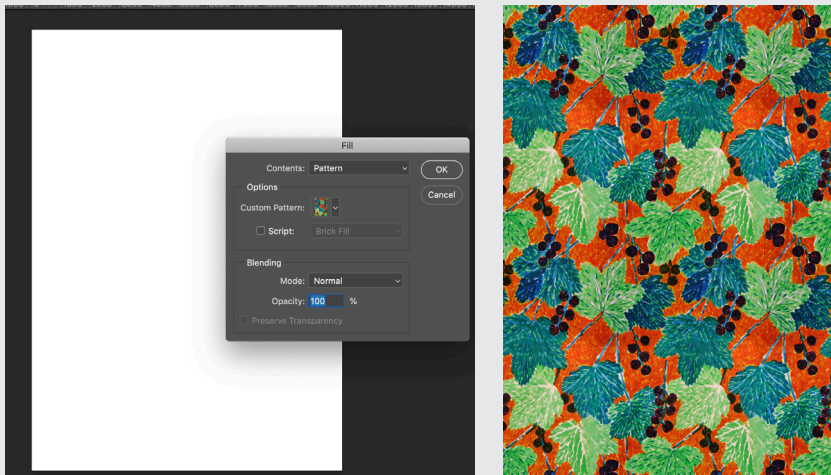
## Half Drop

It is possible to make a half drop – repeat with Offset: Finish first repeat lines of one repeat, then select and copy it. Continue by adding more space in the canvas (**Image → Canvas size**), 200% on its right side, and paste the original repeat in the extension. Do **Filter → Other → Offset**. Tick wrap around. Move then the repeat line of the design only vertically by dragging the vertical bar. Clean the cut repeat lines.

## Define Pattern function

Use Define Pattern function to see the design repeating: Do **Edit → Define Pattern** (after checking the repeat size and resolution). Make a new file, e.g. twice as large as your repeat, or even larger (e.g. bedlinen size 150 x 210 cm), or print size 50 x 70 cm. Remember to keep the same resolution as in your design

Fill the new file with design: Do **Edit → Fill, Contents: Pattern** and select the design from the list of patterns



Work with the repeat. Try to get rid of blocks and horizontal and vertical stripes (in case the design is not a stripe design, of course!). You can work with the original image, and then do the **Edit → Define Pattern** function again

You can also work with the image with repeating pattern: Take Marquee tool and change its style from normal to fixed size. Check the size of the repeat from original image, and write it in Options panel. Marquee will now only make selections sized the repeat. Select an area where you have fixed the repeat, and do **Edit → Define Pattern**. Deselect the selection and fill the image with a new pattern. Continue these steps until you are satisfied with the repeat

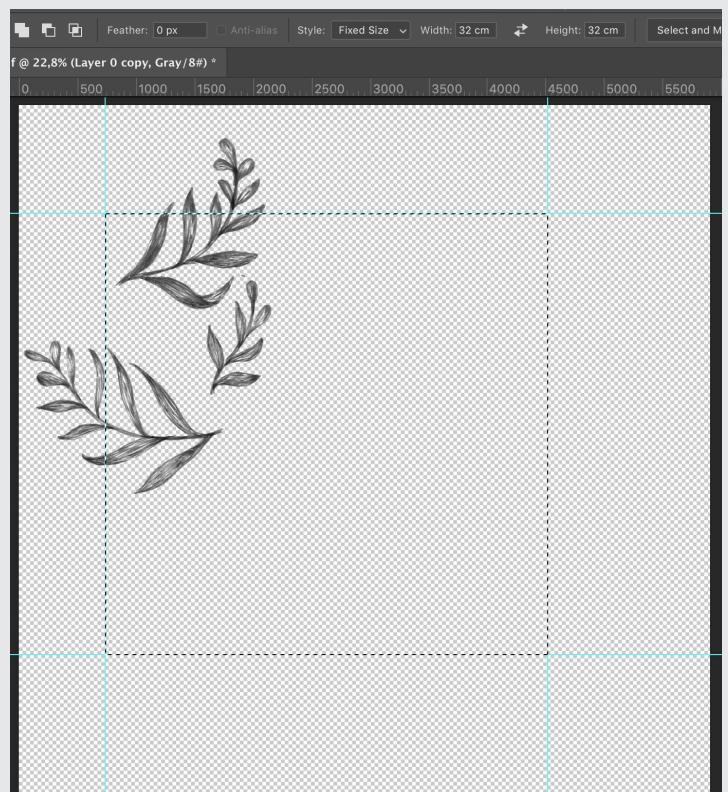
Go to **Patterns-Window (Window → Patterns)** and delete the pattern presets made in the process

## “Building” the repeat

This method allows you to build the repeat more freely. In this method you first decide the size of the repeat, and then build the repeat into that size.

Start by deleting the background of the design and adding more space in the canvas (**Image → Canvas size**), under the design and on its right side.

Make guidelines to show the repeat, you can use Marquee tool to help in it: Take Marquee tool and change its style from normal to fixed size. Write the size of the desired repeat size in Options Panel, and click on the design to define the repeat size. Drag guidelines to show the repeat.



**Copy the design horizontally and vertically to show 2 x 2 repeats of the design.** Several tools could be used for this:

Simple copying could be used:

- Select one repeat with the Marquee tool (in Fixed size – mode) and alt-drag to copy it. Copy the design exactly in correct place to avoid mistakes! For precise working, see the selection edges snap to the guidelines, press shift-button to copy the design only horizontally or vertically and keep an eye on the values appearing into page: these values should be now exactly same as your repeat size

**OR for more precise working, Free Transform could be used:**

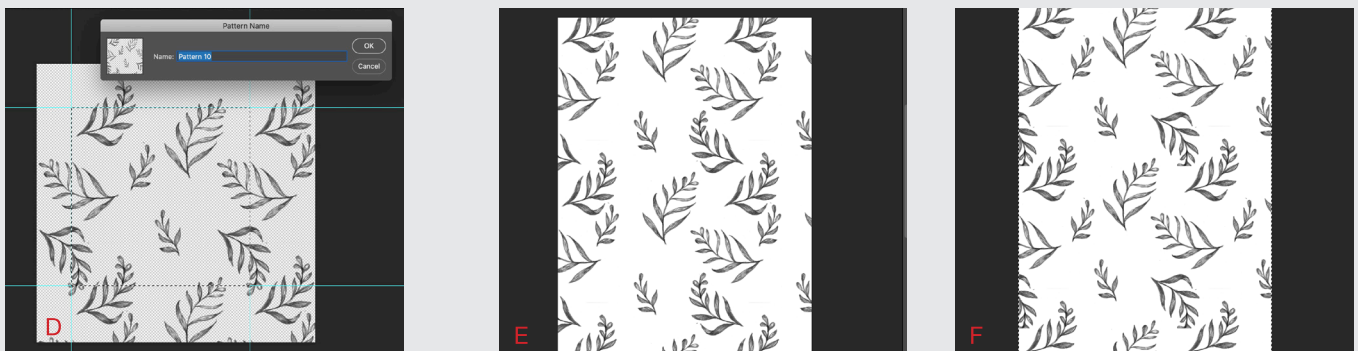
- Select the design (select all the layers), and **duplicate the layers: Layer -> New layer via copy (Ctrl + J)**. Use **Edit -> Free Transform (Ctrl + T)** to move the design. You can move the selection horizontally using X-value, and vertically using Y-value. **Press down the triangle symbol between X and Y-values!**
- **Write the width of the repeat in X** (e.g.50cm). Confirm the function by ticking the V-symbol in Options-panel (A)
- **Select all layers, and make copies of them (Ctrl + J)**. Move both of these layers vertically: Go to Edit -> Free Transform. **Write the height of the repeat in Y** (e.g. 64 cm). Confirm the function by ticking the V-symbol in Options-panel (B)
- Smart Objects might not move with Free Transform as they should, so if they won't work, then rasterize Smart Object before moving them
- Try also half-drop repeat: copy one repeat, and with Free Transform move the copied repeat one repeat width in X and half repeat height in Y; do it vice versa for tile repeat

No matter which copying method was used, **next step is to work with the space between repeats.** You could add one copy of the design in the center to create a half drop look, or add several copies to create an all over feeling. You can leave more or less space between the elements, and copy and paste other elements in the design. Or whatever suites for your design. (C)

- Use Smart Objects if you scale or rotate elements!



Use Edit -> Define Pattern function to see how the design repeats: **Select one repeat with the Marquee tool (in Fixed size mode) from the center of the 2 x 2 repeat and do: Edit -> Define Pattern (D)**. Fill this pattern in a new document (E). If you don't like the repeat, continue working with the original, and test it again by filling the pattern in a new document (F)



### Scripted Patterns

In Fill window there's an option Script. Filling patterns as scripted suites in general better for e.g. using patterns in illustrations and graphic design than to actually make a repeat, but Brick Fill could be used to make a tile repeat and Random Fill could might be useful in some cases when designing all-over repeats

Script: Brick Fill could be used to make a brick/half drop repeat. For basic version, select: Pattern Scale 1, Spacing 0, Offset between rows 50%, Color Randomness 0, Brightness randomness 0, Pattern Rotate angle 0. Of course also other options could be used, but be careful, as many of them could expand the actual size of the repeat a lot, and you might would not know anymore what is the real size of the repeat.

Script: Random Fill could sometimes be useful when placing small elements into an all-over design. Clear a background from the element you want to use and define it as pattern. Use Random Fill to make the composition. Note, that the design is not in repeat after this, but you must still fix the repeat using any of the tools described in this hand-out!