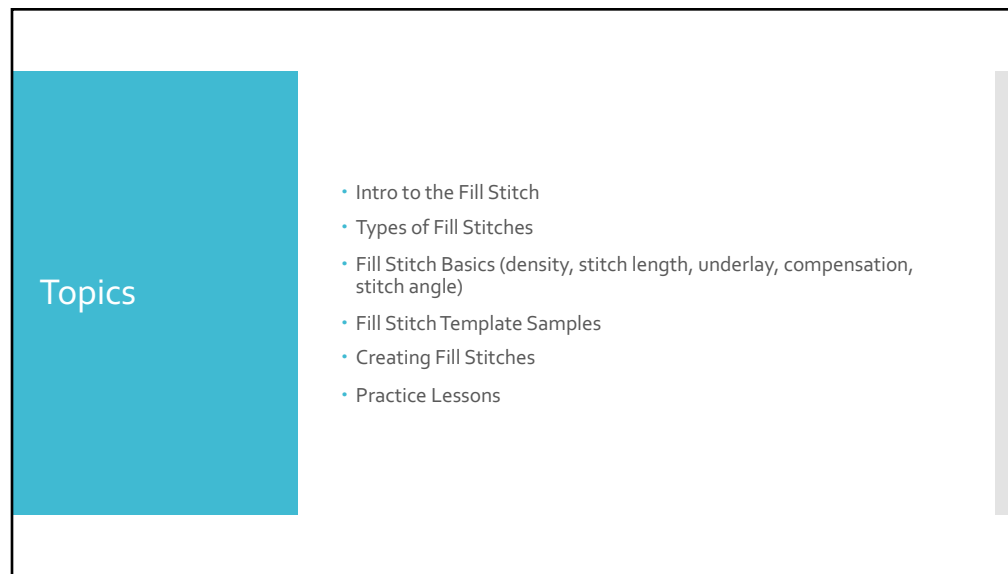


1



- Intro to the Fill Stitch
- Types of Fill Stitches
- Fill Stitch Basics (density, stitch length, underlay, compensation, stitch angle)
- Fill Stitch Template Samples
- Creating Fill Stitches
- Practice Lessons

2

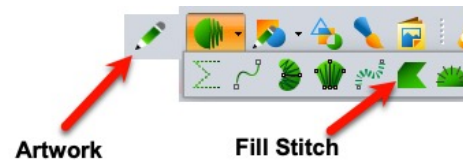
Intro to Fill Stitches

- The Fill stitch is typically reserved for objects that are 7.0mm wide or wider. The width can be as large as you need it to be.
- The fill stitch is generally the most obtrusive to the fabric. It distorts the fabric the most and will cause more pucker and overall problems than the other stitch types. A lot of the issues can be eliminated by choosing the correct underlay, density, stitch length, and fill stitch direction.



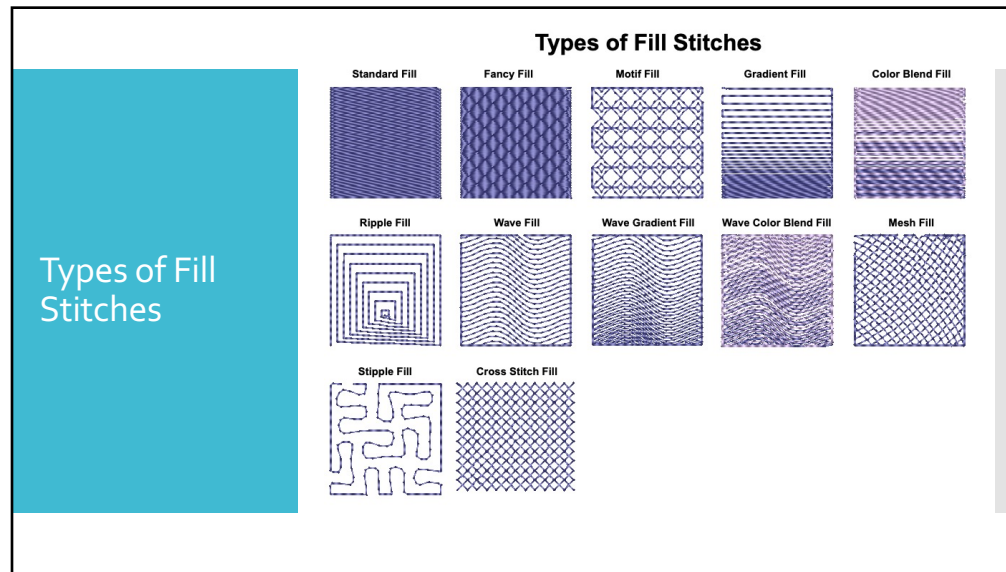
3

Creating Fill Stitches

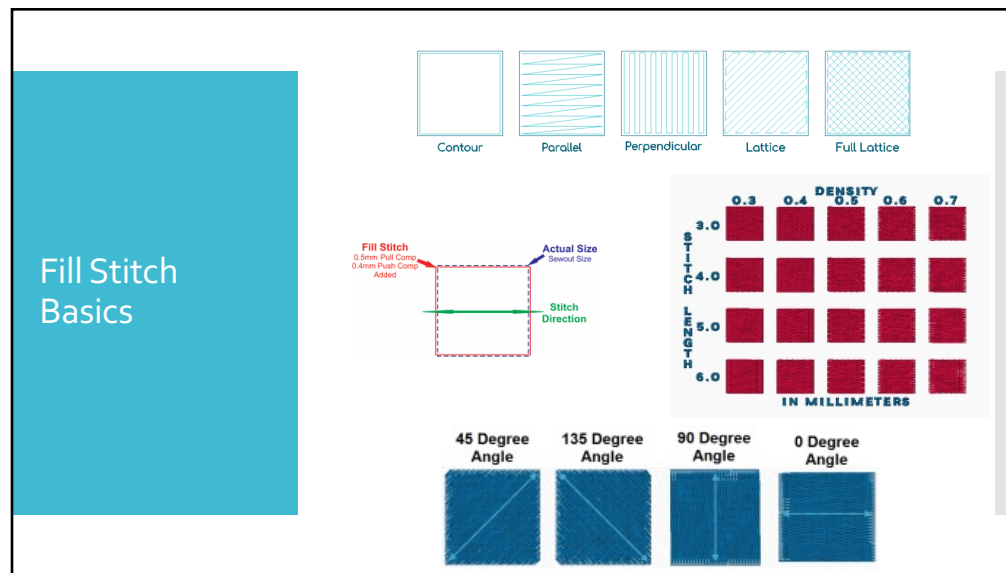


- Use the Fill Stitch tool or Artwork tool to create fill stitches.
- If you use the Artwork tool, you must convert the artwork to the desired fill stitch.

4



5



6

Fill Density & Stitch Length

- When discussing density for fill stitches we always talk about stitch length at the same time.
- When dealing with a fill stitch, the stitch length used makes a difference in what density you need to apply to the objects.
- The goal is always to try and use the lightest density possible that allows you to still maintain full coverage over the fabric. The stitch length plays a factor in density needed for fill stitches.

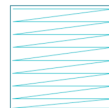
		DENSITY				
		0.3	0.4	0.5	0.6	0.7
STITCH LENGTH	3.0	1028 Stitches	799 Stitches	668 Stitches	573 Stitches	519 Stitches
	4.0	816 Stitches	651 Stitches	544 Stitches	468 Stitches	425 Stitches
	5.0	696 Stitches	584 Stitches	496 Stitches	419 Stitches	373 Stitches
	6.0	666 Stitches	516 Stitches	423 Stitches	374 Stitches	338 Stitches
		IN MILLIMETERS				

7

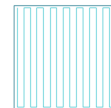
Fill Underlay



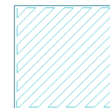
Contour



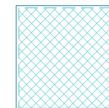
Parallel



Perpendicular



Lattice



Full Lattice

Contour – travels along the perimeter of a structure

Parallel – travels the same direction of the top stitch

Perpendicular – travels the opposite direction of the top stitch

Lattice – travels at a 135-degree angle to the top stitch

Full Lattice – double lattice underlay where one row is 45 degrees to the top stitch and the other row is 135 degrees to the top stitch

Woven Fabric

Type	Small Size	Medium + Size
Contour		X
Perpendicular	X	X

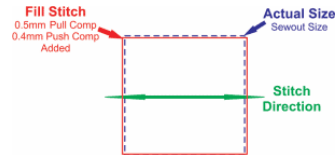
Knit Fabric

Type	Small Size	Medium + Size
Contour	X	X
Perpendicular	X	
Full Lattice		X

This is just a basic guide. Your preference may vary.

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Fill Compensation



Fill Stitch Compensation

It is extremely important to apply to correct push and pull compensation to fill stitch objects. This will ensure the width and length of the stitches are as intended.

Pull Compensation - apply 0.5mm of pull comp. to both sides of a fill stitch. If going onto a very stable woven fabric apply 0.4mm to both sides. If the fill object is extra large (wider than 4 inches) it may pull more.

Push Compensation - apply 0.4mm of push comp. to both sides of a fill stitch that utilizes a standard density (0.4 - 0.6mm). If the density is 0.6 - 0.8mm apply 0.2mm. If density is 0.9mm or more do not apply push compensation to the fill.

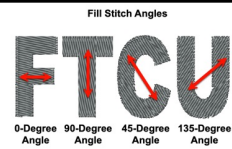
Handling Overlapping Stitches

If the fill will be overlapped by a stitch later, add the following amount of pull compensation in the overlapped area:

- Bordered by a Fill - make sure you have 1.0mm of overlap
- Bordered by a Satin - make sure you have 1.0mm of overlap
- Bordered by a Run - make sure you have 0.5mm of overlap.

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Fill Stitch Angle



- Fill stitches distort the fabric the most and will cause more pucker and overall problems than the stitch types. A lot of the issues can be eliminated by choosing the correct density and fill stitch direction.
- When a fill uses a 45- or 135-degree angle it places an amazing amount of stress on the base fabric as most are woven in a linear manner. This angle leads to a great increase in garment distortion and pucker.
- While 90-degree angle fill patterns work fine for woven fabrics you need to be careful when placing them onto knits. Most knit fabrics stretch from left-to-right on wearable knits and as a result they have vertical rows. When you lay a fill pattern at 90 degrees on these knit fabrics the thread tends to fall between rows and the material is often exposed. Most digitizers will add more density to hide the exposed areas which is not good as this makes the fill stitch stiff and hard.
- Fill stitches perform best at 0 degrees on most fabric types. Anytime you can stick with 0-degree fill patterns you should. If you choose to utilize fill patterns at an angle other than 0-degrees, you should look for ways to counter pull the material by using appropriate underlay and stitch angles on objects close by.

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Fill Stitch Templates

- There are several fill stitch templates recommended to stitch out. These will help you visualize settings you like best.
- These can be found here: <https://digitizingmasterclass.com/docs/digitizing-with-dj/recipes/fill-stitch-recipes/>

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Practice Lessons

- Guided Lessons
 - <https://digitizingmasterclass.com/docs/ftcu-guided-lesson/tools-for-creating/lesson-6-the-fill-stitch/>
 - Practice Lesson 6A: <https://digitizingmasterclass.com/docs/ftcu-guided-lesson/tools-for-creating/practice-lesson-6a/>
 - Practice Lesson 6B: <https://digitizingmasterclass.com/docs/ftcu-guided-lesson/tools-for-creating/practice-lesson-6b/>
- Digitizing Masterclass Lite
 - <https://digitizingmasterclass.com/digitizing-masterclass-lite/>

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