

Fabric Reference Chart

(Software Settings / Sewing Guide)

KNITS <i>Golf Shirts, T-Shirts, etc</i>	Small Text <i>5 mm tall up to 1/4" tall</i>	Narrow-Column Satin Stitches <i>up to 1.5 mm up to 1/16"</i>	Normal-Column Satin Stitches <i>1.5 to 3.5 mm 1/16" to 1/8"</i>	Wide-Column Satin Stitches <i>3.5 to 5 mm 1/8" to 3/16"</i>	XWide-Column Satin Stitches <i>5 mm and up 3/16" and up</i>	Toned-Contrast Fill Stitches <i>Similar-Color Thread & Fabric</i>	Normal-Contrast Fill Stitches <i>Lt Thread / Dk Fabric Dk Thread / Lt Fabric</i>	Sharp-Contrast Fill Stitches <i>White on Black Black on White</i>
Density	4.8	5.2	5.8	6.5	7	4.5	5	5.5
Pull Comp (%)	25%	20%	15%	5%	3%	0.3 mm	0.3 mm	0.3 mm
Underlay	Center	Center	Edge	Edge + DoubleZZ	Edge + DoubleZZ	Edge + Parallel 90°	Edge + Parallel 90°	Edge + Parallel 90°
Passes	2	2	1	2	2	2	2	2
Stitch Length	1.1	1.2	1.3	1.5	1.5	1.5	1.5	1.5
Margin			0.3	0.5	0.7	0.5	0.5	0.5
Density				1.2	1.5	1	1.2	1.5
Max Stitch Length				12	12	2	2	2
Travel (Under Path)	1	1.1	1.2	1.8	1.8	2	2	2
Pattern						up-40-01-00-25-00	up-40-01-00-25-00	up-40-01-00-25-00

FLEECE <i>Sweatshirts</i>	Small Text <i>5 mm tall up to 1/4" tall</i>	Narrow-Column Satin Stitches <i>up to 1.5 mm up to 1/16"</i>	Normal-Column Satin Stitches <i>1.5 to 3.5 mm 1/16" to 1/8"</i>	Wide-Column Satin Stitches <i>3.5 to 5 mm 1/8" to 3/16"</i>	XWide-Column Satin Stitches <i>5 mm and up 3/16" and up</i>	Toned-Contrast Fill Stitches <i>Similar-Color Thread & Fabric</i>	Normal-Contrast Fill Stitches <i>Lt Thread / Dk Fabric Dk Thread / Lt Fabric</i>	Sharp-Contrast Fill Stitches <i>White on Black Black on White</i>
Density	4.8	5.2	5.8	6.5	7	4.5	5	5.5
Pull Comp (%)	20%	18%	12%	5%	3%	0.3 mm	0.3 mm	0.3 mm
Underlay	Center	Center	Edge	Edge + DoubleZZ	Edge + DoubleZZ	Edge + Parallel 90°	Edge + Parallel 90°	Edge + Parallel 90°
Passes	2	2	1	2	2	2	2	2
Stitch Length	1.1	1.2	1.3	1.5	1.5	1.5	1.5	1.5
Margin			0.4	0.6	0.8	0.5	0.5	0.5
Density				1.2	1.5	1	1.5	1.8
Max Stitch Length				12	12	2	2	2
Travel (Under Path)	1	1.1	1.2	1.8	1.8	2	2	2
Pattern						up-40-01-00-25-00	up-40-01-00-25-00	up-40-01-00-25-00

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WOVENS <i>Dress Shirts, Denim, etc</i>	Small Text <i>5 mm tall up to 1/4" tall</i>	Narrow-Column Satin Stitches <i>up to 1.5 mm up to 1/16"</i>	Normal-Column Satin Stitches <i>1.5 to 3.5 mm 1/16" to 1/8"</i>	Wide-Column Satin Stitches <i>3.5 to 5 mm 1/8" to 3/16"</i>	XWide-Column Satin Stitches <i>5 mm and up 3/16" and up</i>	Toned-Contrast Fill Stitches <i>Similar-Color Thread & Fabric</i>	Normal-Contrast Fill Stitches <i>Lt Thread / Dk Fabric Dk Thread / Lt Fabric</i>	Sharp-Contrast Fill Stitches <i>White on Black Black on White</i>
Density	4.8	5.2	5.5	6.2	6.8	4.5	4.8	5.2
Pull Comp (%)	7%	5%	2%	-	-	0.3 mm	0.3 mm	0.3 mm
Underlay	Center	Center	Edge	Edge + DoubleZZ	Edge + DoubleZZ	Parallel 90°	Parallel 90°	Parallel 90°
Passes	2	2	1	1	1			
Stitch Length	1.1	1.2	1.3	1.5	1.5			
Margin			0.7	0.9	1	0.5	0.5	0.5
Density				0.8	1	0.8	1	1.2
Max Stitch Length				12	12	2	2	2
Travel (Under Path)	1	1.1	1.2	1.8	1.8	2	2	2
Pattern						up-40-01-00-25-00	up-40-01-00-25-00	up-40-01-00-25-00

CAPS <i>Headwear</i>	Small Text <i>5 mm tall up to 1/4" tall</i>	Narrow-Column Satin Stitches <i>up to 1.5 mm up to 1/16"</i>	Normal-Column Satin Stitches <i>1.5 to 3.5 mm 1/16" to 1/8"</i>	Wide-Column Satin Stitches <i>3.5 to 5 mm 1/8" to 3/16"</i>	XWide-Column Satin Stitches <i>5 mm and up 3/16" and up</i>	Toned-Contrast Fill Stitches <i>Similar-Color Thread & Fabric</i>	Normal-Contrast Fill Stitches <i>Lt Thread / Dk Fabric Dk Thread / Lt Fabric</i>	Sharp-Contrast Fill Stitches <i>White on Black Black on White</i>
Density	4.5	4.8	5.2	5.8	6.2	4.5	4.8	5
Pull Comp (%)	5%	3%	-	-	-	0.3 mm	0.3 mm	0.3 mm
Underlay	Center	Center	Edge	ZigZag	ZigZag	Edge + Parallel 90°	Edge + Parallel 90°	Edge + Parallel 90°
Passes	2	2	1	-	-	2	2	2
Stitch Length	1.2	1.2	1.2	1.8	1.8	1.5	1.5	1.5
Margin			0.9	1	1	0.7	0.7	0.7
Density				0.8	0.8	0.5	0.8	1
Max Stitch Length				12	12	2	2	2
Travel (Under Path)	1.2	1.2	1.2	1.5	1.5	2	2	2
Pattern						up-40-01-00-25-00	up-40-01-00-25-00	up-40-01-00-25-00

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TERRY <i>Towels</i>	Small Text <i>5 mm tall up to 1/4" tall</i>	Narrow-Column Satin Stitches <i>up to 1.5 mm up to 1/16"</i>	Normal-Column Satin Stitches <i>1.5 to 3.5 mm 1/16" to 1/8"</i>	Wide-Column Satin Stitches <i>3.5 to 5 mm 1/8" to 3/16"</i>	XWide-Column Satin Stitches <i>5 mm and up 3/16" and up</i>	Toned-Contrast Fill Stitches <i>Similar-Color Thread & Fabric</i>	Normal-Contrast Fill Stitches <i>Lt Thread / Dk Fabric Dk Thread / Lt Fabric</i>	Sharp-Contrast Fill Stitches <i>White on Black Black on White</i>
Density	4.8	5.2	5.5	6.2	6.8	4.8	5.2	5.5
Pull Comp (%)	7%	5%	2%	-	-	0.3 mm	0.3 mm	0.3 mm
Underlay	Center	Center	ZigZag	DoubleZZ	DoubleZZ	Edge + Parallel 90°	Edge + Parallel 90°	Edge + Parallel 90°
Passes	2	2	-	-	-	1	1	1
Stitch Length	1.1	1.2	1.3	1.5	1.5	1.5	1.5	1.5
Margin			0.4	0.6	0.6	0.5	0.5	0.5
Density			2.4	1.8	1.8	1.5	1.8	2.2
Max Stitch Length			12	12	12	2	2	2
Travel (Under Path)	1	1.1	1.2	1.8	1.8	2	2	2
Pattern						up-40-01-00-25-00	up-40-01-00-25-00	up-40-01-00-25-00

JACKETS <i>Windbreakers, Satin Jackets</i>	Small Text <i>5 mm tall up to 1/4" tall</i>	Narrow-Column Satin Stitches <i>up to 1.5 mm up to 1/16"</i>	Normal-Column Satin Stitches <i>1.5 to 3.5 mm 1/16" to 1/8"</i>	Wide-Column Satin Stitches <i>3.5 to 5 mm 1/8" to 3/16"</i>	XWide-Column Satin Stitches <i>5 mm and up 3/16" and up</i>	Toned-Contrast Fill Stitches <i>Similar-Color Thread & Fabric</i>	Normal-Contrast Fill Stitches <i>Lt Thread / Dk Fabric Dk Thread / Lt Fabric</i>	Sharp-Contrast Fill Stitches <i>White on Black Black on White</i>
Density	4.6	5	5.3	5.8	6.2	4.5	4.8	5.2
Pull Comp (%)	5%	4%	2%	-	-	0.3 mm	0.3 mm	0.3 mm
Underlay	Center	Center	Edge	Edge + DoubleZZ	Edge + DoubleZZ	Edge + Parallel 90°	Edge + Parallel 90°	Edge + Parallel 90°
Passes	2	2	1	1	1	1	1	1
Stitch Length	1.1	1.2	1.3	1.5	1.5	1.5	1.5	1.5
Margin			0.8	1	1	0.7	0.7	0.7
Density				0.8	0.8	0.6	0.8	1
Max Stitch Length				12	12	2	2	2
Travel (Under Path)	1	1.1	1.2	1.8	1.8	2	2	2
Pattern						up-40-01-00-25-00	up-40-01-00-25-00	up-40-01-00-25-00

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LEATHER <i>Jackets, Luggage, etc</i>	Small Text <i>5 mm tall up to 1/4" tall</i>	Narrow-Column Satin Stitches <i>up to 1.5 mm up to 1/16"</i>	Normal-Column Satin Stitches <i>1.5 to 3.5 mm 1/16" to 1/8"</i>	Wide-Column Satin Stitches <i>3.5 to 5 mm 1/8" to 3/16"</i>	XWide-Column Satin Stitches <i>5 mm and up 3/16" and up</i>	Toned-Contrast Fill Stitches <i>Similar-Color Thread & Fabric</i>	Normal-Contrast Fill Stitches <i>Lt Thread / Dk Fabric Dk Thread / Lt Fabric</i>	Sharp-Contrast Fill Stitches <i>White on Black Black on White</i>
Density	4	4.2	4.5	4.8	5	3.6	4	4.4
Pull Comp (%)	5%	3%	-	-	-	0.3 mm	0.3 mm	0.3 mm
Underlay	Center	Center	Center	Center	Center	ZigZag 90°	ZigZag 90°	ZigZag 90°
Passes	2	2	2	2	2			
Stitch Length	1.6	2	2.8	3.6	3.8			
Margin						1.2	1.2	1.2
Density						0.2	0.4	0.6
Max Stitch Length						3.5	3.5	3.5
Travel (Under Path)	1.5	1.5	1.8	2	2	3	3	3
Pattern						up-56-01-00-25-00	up-56-01-00-25-00	up-56-01-00-25-00

CORDUROY	Small Text <i>5 mm tall up to 1/4" tall</i>	Narrow-Column Satin Stitches <i>up to 1.5 mm up to 1/16"</i>	Normal-Column Satin Stitches <i>1.5 to 3.5 mm 1/16" to 1/8"</i>	Wide-Column Satin Stitches <i>3.5 to 5 mm 1/8" to 3/16"</i>	XWide-Column Satin Stitches <i>5 mm and up 3/16" and up</i>	Toned-Contrast Fill Stitches <i>Similar-Color Thread & Fabric</i>	Normal-Contrast Fill Stitches <i>Lt Thread / Dk Fabric Dk Thread / Lt Fabric</i>	Sharp-Contrast Fill Stitches <i>White on Black Black on White</i>
Density	4.8	5.2	5.5	6.2	6.8	4.8	5.2	5.5
Pull Comp (%)	7%	5%	2%	-	-	0.3 mm	0.3 mm	0.3 mm
Underlay	Center	Center	Edge	Edge + DoubleZZ	Edge + DoubleZZ	Edge + Parallel 90°	Edge + Parallel 90°	Edge + Parallel 90°
Passes	2	2	2	2	2	2	2	2
Stitch Length	1.1	1.2	1.3	1.5	1.5	1.5	1.5	1.5
Margin			0.6	0.8	0.8	0.6	0.6	0.6
Density				1.5	1.5	0.8	1.2	1.8
Max Stitch Length				12	12	2	2	2
Travel (Under Path)	1	1.1	1.2	1.8	1.8	2	2	2
Pattern						up-40-01-00-25-00	up-40-01-00-25-00	up-40-01-00-25-00

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FABRIC	NEEDLE	BACKING	TOPPING
Piqué Knit, Golf Shirts	75/11 Lt Ball Point	Hvy Cutaway	Yes
Knits, T-Shirts	75/11 Lt Ball Point	Med Cutaway	Yes
Woven, Dress Shirts	75/11 Sharp	Hvy Tearaway	No
Caps, Headwear - Lt / Med	80/12 Sharp	Med Tearaway	No
Caps, Headwear - Hvy	90/14 Sharp	Lt Tearaway	No
Denim - Lt / Med	75/11 Sharp	Med Tearaway	No
Denim - Hvy	80/12 Sharp	Lt Tearaway	No
Fleece, Sweatshirts - Lt / Med	75/11 Med Ball Point	Med Cutaway	Yes
Fleece, Sweatshirts - Hvy	75/11 Hvy Ball Point	Lt Cutaway	Yes
Nylon Windbreakers	75/11 Lt Ball Point	Med Cutaway	No
Satin Jackets	75/11 Lt Ball Point	Med Cutaway	No
Corduroy - Lt / Med	75/11 Lt Ball Point	Med Tearaway	Yes
Corduroy - Hvy	75/11 Med Ball Point	Lt Tearaway	Yes
Terry Cloth, Towels	75/11 Lt Ball Point	Water-Soluble Tearaway	Yes
Lycra, Spandex	70/10 Med Ball Point	Water-Soluble Tearaway	No
Silk, Lingerie	70/10 Lt Ball Point	Water-Soluble Tearaway	No
Coated, Waterproofed	80/12 Sharp (Teflon)	Hvy Tearaway	No
Canvas - Lt / Med	75/11 Sharp	Med Tearaway	No
Canvas - Hvy	80/12 Sharp	Lt Tearaway	No
Leather, Garments - Lt / Med	80/12 Wedge Point	Lt Tearaway	No
Leather, Luggage - Hvy	90/14 Wedge Point	Lt Tearaway	No

TIPS

*** A lower size needle (65/9), along with #60 thread, results in improved crispness on small lettering and / or detailed work

*** Use water-soluble backing wherever skin contact is a concern

*** #30 Thread and a lower Stitch Density will reduce needle penetrations while providing same coverage (for leather & waterproofed fabrics)

*** Poly Thread is recommended wherever chlorine, salt water or industrial laundering & bleaching are a concern