

Embroidery & Sewing Machine Needle Selection Guide

Needle Hints & Tips

Remember when you change:

- The needle size or the eye size of the needle, you are changing the tension on the top thread.
- The needle size, you are changing the relationship of the needle scarf to the hook point.
- The needle point, you are changing the way the needle penetrates the fabric.

This is not just about needles! When you change thread, backing, brand of blank product or even digitizers you may also affect the balance.

BEST ADVICE! There is no firm, fast rule to solving problems associated with needles. Experimentation to solve problems is the best advice. Keep a variety of needle types, sizes, and finishes on hand so you will have the tools needed to solve any related problem.

Sewing & Embroidery Machine Needle Selection Information

Organ Brand Needle Guide

FLAT SHANK NEEDLES

15x1: HAx1, 705H This is the standard needle with a flat shank and a regular size eye for most home sewing machines and home sewer based embroidery and quilting machines. It is widely available in a large range of sizes with a sharp or ball point, also available with PD/titanium finish.

15x1 ST: HAx1 ST, 705H-E This is a special version of the 15x1 for embroidery and decorative stitching. It is made to higher standards for longer life. It has an oversize eye to reduce stress and tension on the thread. It also accommodates metallic threads for heavier top stitching thread and makes needle threading easier. It is available in sharp or ball point, also available with PD/titanium finish.

15x1 SP: HAx1 SP This is a special version of the 15x1 for stretch or elastic materials and tightly woven knits. It is made to higher standards, it has a snake's head shape due to a combination of a slightly bulged eye and a slightly reduced blade above the eye.

HAx130EBBR: This needle was developed for use in the new Babylock EMB6 & Brother PR-600 PR620 embroidery machines. It is an industrial quality machine embroidery needle with a flat shank, reinforced blade, light ball point and an oversize eye. It is available in a range of sizes with a hard chrome finish.

15x2: (15x1LL), HAx2, HAx1LL, 130LR This is the leather point needle with a flat shank. It has all of the same features as 15x1 with the addition of a lens shaped point to cut through leather and other heavy materials. Caution must be used when changing to this needle. Extra space must be left between needle penetrations to avoid "cutting out" the design.

HLx5: This needle is made for sewing hard, thick or heavy materials. It will sew through multiple ply applications like quilting, jeans, applique or heavy embroidery. It is actually an industrial needle with a flat shank. If you are bending or breaking 15x1's this needle could solve your problem. These hard chrome needles will outlast a standard 15x1 and the PD/titanium needles are even more wear-resistant. They are available in either sharp or ball point with a hard chrome or PD/titanium finish.

HAx130N: This special needle has a very long, almost double length, eye. It is made for Top-Stitching or Decorative stitching and will accept heavy or multiple threads. It can also be used for embroidery with heavy, metallic threads. It is available in chrome or PD/titanium finish.

HAx130Spi Microtex: This needle has a very slim, acute, sharp point. Intended for sewing micro fibers, tightly woven thin polyester, silk, foils, etc. Prevents puckering and runs in very tightly woven materials. Similar to Schmetz 130/705 HM

ELx705: This needle is made specifically for chain stitching or cover stitching. It has 2 grooves, a slightly longer scarf and a ball point. If your serger calls for a 15x1 needle and is breaking threads, the 2nd groove on this needle may solve your problem.

ROUND SHANK NEEDLES

DB-K5: This needle is designed especially for industrial /commercial embroidery machines such as Tajima. The DB-K5 needle has a one size larger eye than that found in a regular needle. Unlike sewing thread used for general apparel sewing, embroidery threads are "fluffier" and have less tensile strength. A larger needle eye, without increased blade diameter, allows the embroidery thread to pass easily through the needle's eye without fraying or snapping

DB-K5SS: This embroidery machine needle has all the eye features of the DBxK5, but the point has a very narrow wedge to make penetration through leather, vinyl and similar materials easier and neater. The very narrow wedge point "slices" through the leather-like materials while making a cleanly cut needle hole. A standard "set" or "sharp" point needle punches its way through leather like materials which may make irregularly or undesirably shaped needle holes. The very narrow wedge point "slices" through the

leather like materials while making a cleanly cut needle hole.

Other available wedge point needles typically have a longer wedges then the DB-K5SS embroidery needles. That's fine for most sewing operations, but in machine embroidering, the stitches are very close together, The longer wedge point needles will actually punch out the design created by those close pattern of embroidered stitches. The extra narrow wedge point of the DB-K5SS embroidery machine needle leaves enough distance between stitches in embroidered patterns to maintain the strength of the leather like material and avoid punching out the embroidered design.

DBxK5 Q1: This embroidery machine needle was made for the Janome MB4 and Melco EP4 4 needle embroidery machines. It has a long extended groove, longer deeper scarf, tapered blade and a slim extra light ball point.

DBx7ST: The eye of the DBx7ST is designed particularly for metallic type embroidery threads. The eye of this needle is shaped like a rectangle. The special eye design facilitates the passage of metallic threads through the needle's eye.

BALL POINT NEEDLES

Ball point needles are designed to alleviate making holes in knit or loosely woven materials. The cross fibers which constitute the knit or loosely woven materials are relatively far apart as compared to those in tightly woven materials. When a needle with a standard "set" or "sharp" point encounters one of those fibers in penetrating the fabric, it cuts right through the fiber. This creates a hole in the fabric. The ball point needle pushes aside the fiber it encounters in penetration and thereby avoids making a damaging hole in the fabric. (It is also recommended to use the thinnest possible needle for a particular fabric)

PD (Perfect Durability) NEEDLES

PD needles have a titanium-nitride ceramic finish which makes them more wear-resistant than any other needles. When embroidering large stitch patterns or penetrating very abrasive, dense or tough materials the needle points and surface will maintain its original shape and dimensions 3 to 5 times longer. PD needle points will not wear down as fast as chromium plated needle points. The use of PD needles gives you longer needle life, fewer defects due to "dulled" needle points, and increased productivity.

CS (Cool Sew) NEEDLES

The Cool-Sew finish was developed to alleviate needle problems resulting from the following situations:

- 1) Heat Buildup in penetration of synthetic, chemically treated, or very dense materials
- 2) Materials or residue sticking to needle surface or in eye
- 3) Excessive sewing thread breakage due to friction in the needle eye

As a needle penetrates synthetic, chemically treated or very dense materials a great deal of friction may develop. The needle may get so hot as to actually melt or fuse the sewn material along the seam. The needle's heat may melt the synthetic sewing thread. When the machine stops, the melted residue may stick to the needle surfaces as it cools. The nature of some materials makes them rather "sticky." Materials such as rubber, foam, and synthetic fillers stick to surfaces with which they make contact. They may stick to needles which penetrate through them, even at relative slow sewing speeds. The result may cause undesirable stitch appearances as these materials push through or pull up through needle holes.

Needle Size Selection Information

Canvas	80/12 sharp
Coated/water proof	80/12 sharp/ball point
Corduroy	75/11 sharp/ball point
Cotton Sheeting	70/10, 75/11, 80/12 sharp
Denim	75/11 sharp
Dress Shirt	70/10, 75/11, 80/12 ball point
Golf Shirt	70/10, 75/11, 80/12 ball point
Lace	75/11 sharp point
Leather	80/12, 90/14 sharp point 75/11, 90/14 wedge point
Lingerie & Silk	60/8, 70/10, 75/11 sharp/ball point
Lycra, Spandex	70/10, 75/11, 80/12 ball point
Nylon Wind breaker	70/10, 75/11, 80/12 ball point
Organza	65/9 ball point
Rayon	75/11 ball point
Satin Jacket	75/11 ball point
Sweater Knit	75/11 ball point
Sweatshirt	70/10, 75/11, 80/12 ball point
Taffeta	65/9 ball point
Terry cloth towel	75/11 sharp/ball point
Velvet	65/9 ball point
Vinyl	75/11 sharp point 75/11 wedge point