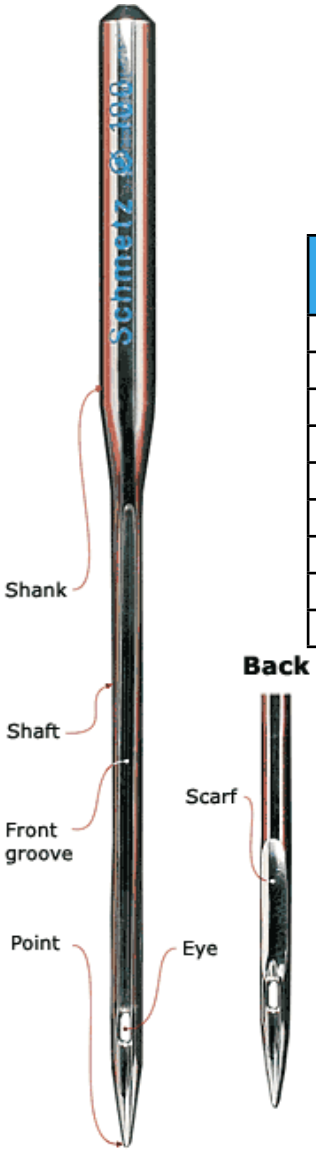
Getting to the Point

Part 1: Closed Eye Needles

Through the years we have worked with scores of leather crafters, new and old alike, who seemed bewildered by the variety of available needles. Good information can be hard to come by for what would seem to be the most common, yet most evasive topics of stitching. In this article we decipher "the code" of the needle so you can "get to the point" of your sewing.



Synthetic Stranded TKT	Synthetic Stranded TEX	Metric Needle System	Singer Needle System
33	T-30	75-90	11-14
46	T-45	90-110	14-18
69	T-70	100-120	18-19
92	T-90	120-140	19-22
138	T-135	140-180	22-24
207	T-210	180-230	24-26
277	T-270	200-230	25-26
346	T-350	230-250	26-27
415	T-400	250-300	27-29

Tech Tip: To keep track of the various needle sizes and points, mark the shanks of your needles with a felt tip pen while they are still in the package. Use different colors for different points, sizes, etc. Next time you need know what size needle is in your machine, you can easily spot your color code, instead of searching the microscopic stamp on the needle.

Step 1:

Identify the System:

The system number details the dimensions of the needle such as overall length, the location and size of the eye, and the distance from the eye to the tip of the needle. The use of the wrong needle system can affect the machine timing and damage the machine. Refer to your machine manual to know which system to use.

Step 2:

Select the Size:

The needle size needs to be matched to the job, according to the material, thread type, and thread weight. Heavy materials or threads require heavier needles. Materials will react differently depending on the application. Softer leathers or fabrics will allow a smaller needle size. Harder leathers or materials like biothane may require a larger needle, or you'll be plagued with skipped stitches or broken needles. You can refer to the chart below to know which needle to use. The Thread to Needle Size Chart represents common combinations, with the first needle sizes representing the smallest recommended needle. This is by no means a perfect combination. Your experience and the stitch appearance you want will be the final determinant.

Needle sizes are noted with a European number, followed by the American Number. The European number is a metric measurement, where 180 is 1.8 mm wide. The American number, also referred to as the Singer number, is an unrelated number system designated by 14, 16 etc. Both systems are used, and the size can be found on the top of the shank of the needle. The best way to remember sizes is to save the package.

Step 3:

Pick the Point:

The needle point depends on the material you are sewing and the desired stitch appearance. They are identified by a letter that typically follows the system number.

ROUND POINTS:

For fabrics, including canvas and nylon, use a round point or "R" needle. Round point needles will push the fibers aside rather that cut a hole. Other specialized round point needles include the "SES"- light ball point, the "SUK"- medium ball point, the "SKF"- heavier ball point, and the "SPI"- acute ball point. In this article, we'll be looking at the leather point needles.

LEATHER POINTS:

Leather points actually cut leather. Each point will give a unique stitch appearance that is rated for different types of work. The most common leather points are the S, LR or RTW, and LL or TW. The diamond or triangle points (SD, D, and DI) are often used in belt and saddle straight stitching.

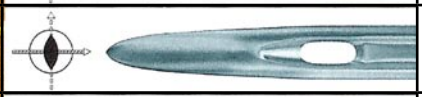
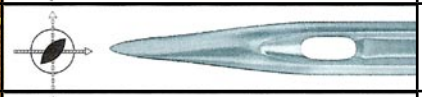
The Point of it All:

Once you have identified your system, and matched the needle size to your thread, all that's left to do is select your needle point. Remember than each system was designed to fit a specific machine designed for a specific job, so not all points or sizes are available with every system. Contact your distributor or give as a call at Campbell Bosworth, and we'll help match the needle for your needs. It is often helpful to order a variety of points until you find one that is suited to your kind of work, and don't be afraid to experiment. After all, the integrity of your product resets in the stitch that holds it together. Your choice of needle can greatly improve the appearance and strength of your product.

Dan Naegle - Campbell Bosworth Machinery Co.
For more information visit our web site...
www.campbell-bosworth.com/supply/needles.html

Tech Tip: If problems occur while sewing, check the needle first. Dulled edges or burrs can cause snags or skipped stitches. Bent needles will also cause headaches. A damaged needle can be the quickest and cheapest repair to an ill mannered machine.

LEATHER POINTS:

Point	Stitch	Needle	Description and Applications
P			Very strong seams. Suitable for all types of leather. Used for footwear, bags, cases, and accessories.
PCL			Similar to the "P". The twist ensures that when the thread emerges from the material, it is protected in the twist groove, rather than cut by the cutting edge.
PCR			Similar to the "P". The twist ensures that when the thread emerges from the material, it is protected in the twist groove, rather than cut by the cutting edge.
S			Very straight seams. A very commonly used leather point. A thicker thread will make a coarse, raised seam. Suitable for all types of leather. Used in footwear, bags, belts, strap, saddlery, etc.
LR or RTW			The best needle for decorative seems inclined slightly to the left. For clothing, bags, and cases. Especially useful for fine stitches with stronger seams. Suitable for all types of leather.
LL or TW			Produces a slightly recessed, straight seam. For footwear, bags, cases, and particularly useful for shoe repair. Suitable for all types of leather.
SD			For fine leather, imitation leather, and coated materials. Straight seams in all directions with minimal needle deflection. Used for embroidery, ornamental stitching, and cross seams.
D or TRI			For footwear, especially for heavy footwear like boots. Suitable for dry hard leather and composites. The best cutting effect of all cutting points. Produces a straight seam. Produces a larger hole than normal.
DI or DIA			Similar to the "S" point, but the four cutting edges allow easier penetration of heavier, harder materials. For a very straight, recessed seam. Suitable for heavy, dry, hard leather with less needle deflection. Produces a larger hole than normal.
VR			Suitable for hard leather. Footwear bags and cases. Seams with stitch angled slightly to the left. The four cutting edges reduce needle deflection.