



By Dan

## Needles

The conversation about needles can be both straight forward and very technical at the same time. For this article, I am going to try to hedge toward the simple. The most important thing to remember is that 99 percent of all household sewing machines can take the exact same needle. This confusing part is that the part # or what we refer to as the system # can be different among different manufacturers. The most common designations are: **130/705H, HA1, HAx1, 15x1**. This designation refers to the overall dimensions of the needle; its length, shank diameter, and in this case a flat on the shank for easy positioning. Within each system there are different thicknesses of needle and different needle designs for optimum performance for various fabrics and specialty threads. Size examples are **80/12, 90/14/100/16** etc... with the largest or thickest size being a **110/18**. The first number is a European designation (**80**) and the second (**12**) is a U.S. designation. The last variation is needle eye size and needle point design. As needle size goes up, the size of the eye gets larger, (ex. a 18 needle has a larger eye than a 12). The manufacturers assume that you will be using larger thread with a larger needle. There are dozens of variations in needle points. The most common and most widely used is a Universal. This needle can be used on all fabrics and should perform well for most applications. It is also the least expensive and therefore should be considered first. If you are getting acceptable results with this needle there is no need to pay more for a specialty needle. What is more important is that you use a high quality brand. We recommend **Schmetz** needles. This is a German Manufacturer and is considered by most experts to be the best needle available. Specialty needles usually have the fabric or type of sewing word added and cost about 50-80% more than a Universal. Words you will see on the package are **Quilting, Denim, Embroidery, Leather, Knit, Top Stitch and Microtex**. You will also still see words like **Sharp** or **Ball Point**. The thing to remember is that Quilting, Denim and Microtex needles are all Sharp point needles, and Knit or Stretch needles are Ball Point. So if you have a Quilting needle in your sewing kit feel free to use it on Denim or vice versa. Here are some simple basic guidelines.

### General Needle Guidelines

- 1- Use a high quality brand. We recommend **Schmetz**.
- 2- Try your standard Universal needle first. Why pay more if you don't need it.?
- 3- If you are not sure what size needle to use, try an 80/12 Universal. It is a great all around needle for a variety of fabrics and thicknesses. This is what we use in our service dept.
- 4- If you are getting skipped stitches on stretch/knit fabric, use a ball point or stretch designated needle. This will reduce what we call flagging and aid in stitch formation and less skipped stitches.
- 4- If you are getting a slightly zig-zaggy straight stitch on wovens, try a Sharp, Denim, Microtex or Quilt needle. The sharp point will break the fabric strand during penetration instead of deflecting to one side or the other of the fiber strand to create a better looking straighter stitch.
- 5- If you are getting shredding or unusually high thread breakage try a Topstitch or Embroidery needle. These needles have a larger eye (example: an 80/12 may have the eye of a 110/18 allowing thread to flow through eye easier)

### The Four Most Common Mis-uses I see with Needles:

- 1- Too large a needle size being used. A needle is not a nail. Try using a 12 instead of a 16 or 18 on thick fabric. It is easier for a pin to go through something thick than a nail. Large diameter needles can lead to many problems.
- 2- Too small a needle size being used. Any size under an 11 should be extremely rare. Very few threads flow smoothly through the small eyes of 10 or below. Also the small hole created with these needles is rarely large enough to provide a space for the thread knot to tuck into. Needle threaders rarely work and are often bent with needles smaller than an 11.
- 3- Expensive specialty needles being used when not needed. Why pay more?
- 4- Dull or bent needles in your machine creating a popping sound and poor stitch quality.
- 5- Needle not fully inserted or inserted backwards creating skipped stitches and thread breakage.

I hope this article is helpful in understanding the mystery of needles.

