Sewing Basics - Know Your Needles By Nancy Fiedler

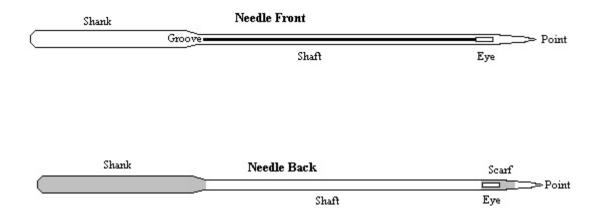
Whether you have a top-of-the-line sewing machine or an economy model, the most important tool used is the sewing machine needle.

The sewing life of a needle is 8 hours. In that time, the point will become worn and stitch quality may become compromised. Keep a variety of needles on-hand to change regularly. A good rule of thumb is to use a new needle at the start of every project.

The type and size of needle to use is determined by:

- Thread type: polyester, cotton, rayon or metallic
- Thread weight: 12wt, 30wt, 40wt, 60wt, 90wt (The higher the number, the finer the thread.)
- Fabric type: knit, woven, densely woven, specialty
- Technique: general sewing, embroidery, embellishing or quilting

Take a look at the anatomy of a needle:





A sewing machine needle is made of six parts:

- 1. The **Shank** is the upper portion of the needle, which is inserted into the sewing machine. The shank on a needle for domestic sewing has a flat back. This needle system is indicated on some packaging by these notations: **HA x 1, 15 x 1 or 130/705**.
- 2. The **Shaft** is the entire lower portion of the needle. The size of the needle is determined by the diameter of the shaft. The smaller the number, the smaller the shaft will be. The eye will increase in size proportionately to the size of the shaft.
- 3. The **Groove** is on the front of the needle. The Groove is designed to allow the thread to lie tightly against the needle as it passes through the fabric.
- 4. The thread passes from the front to the back of the needle through the **Eye**. The thread needs to flow freely through the eye.
- 5. The **Scarf** is an indentation on the back of the needle that allows the hook to pass closely to the needle to form the stitch. The size of the needle will affect the distance of the scarf in relation to the hook.
- 6. The **Point** penetrates the fabric and allows the needle to deliver the thread to the hook to form the stitch. The shape of the point is designed to penetrate different types of fabric.

Choose the needle point for the type of fabric.

• Ball Point 15 x 1 - has a rounded tip that goes between the fibers of the fabric rather than cutting them. Use of a ballpoint needle is recommended on cotton knit, tricot, jersey knits and swimwear fabrics.



Denim/Jeans Needle 15 x 1 - has a special wedge shaped tip to produce optimum results when sewing through multiple layers of dense thick fibers like denim and canvas.



• Leather Needle 15 x 1 - has a lens shaped point for cutting through leather and man-made leather type fabrics. A longer stitch length is recommended so there is extra distance between the holes created by the needle.



 Top Stitch Needle 15 x 1 - has an extra-long eye to accommodate heavy and specialty threads.



• Universal Needle 15 x 1 - is for general sewing of most woven and knit fabrics. The tip is slightly rounder than a sharp, but not as round as a ball point.



• Sharp Needle 15 x 1 - is designed with an extra fine point to pierce densely woven fabrics such as microfiber or thin smooth fabric like taffeta or coated fabrics.

Among the needle types are specialty needles which offer the user features for specific applications.

Janome Blue Tip - is a size 11 ball point needle specially designed for Janome machines. The
needle works well on light-medium weight knit fabrics and is the recommended needle for light
to medium weight embroidery. Also it works well when quilting with polyester thread.





• **Janome Purple Tip** - is a size 14 ball point needle specially designed for Janome machines. This needle is best for heavy weight knits and dense embroidery designs. It is the recommended needle for quilting with cotton threads.



• **Janome Red Tip** - is a size 14 sharp point, which is good for general sewing of medium weight fabrics.



• **Titanium Needles** - have a titanium coating which increases the life of the needle. These needles can be used for about 40 hours.

Needle types come in an assortment of size, choose the needle size for the weight of fabric and weight of thread. Use the chart below as a guide.

Needle Sizes:

European	60	65	70	75	80	90	100	110	120	125
American	8	9	10	11	12	14	16	18	19	20
Fabric	Sheer	Very	Fine	Light	Medium	Medium	Heavy	Upholstery	Denim	Canvas
Types		Fine			Light			Denim		

^{*}Keep an assortment of needles on hand to make it easy to choose the appropriate needle for each project.

Troubleshooting:

- If the thread is breaking or shredding, go up one needle size or try a Top Stitch needle.
- If the stitches are skipping, change the type of needle point, i.e. Ball Point or Sharp.
- If the thread is bouncing, go down one size.
- Check the needle plate, bobbin case and hook often. Any small imperfections may snag the thread as it passes and cause breakage.
- Clean the machine often.