

Sewing Machine Needles & Thread

Needles:

Choosing the correct needle depends on 2 things:

The type (weight) of **thread** you are using – affects the **size** (eye) of needle

The type of **fabric** you are sewing on – affects the **type** of needle

Thread weights and Needle sizes:

The size of a needle refers to the size of the eye of the needle. This is shown as 2 numbers (metric and imperial). The lower the number, the smaller the eye. The general rule is use a small size needle for finer fabrics and a larger eye for thicker fabrics.

Threads are manufactured in different weights (thicknesses). While manufacturers may number the weights differently, commonly the lower the number, the thicker the thread. You should try to match thread weight to the most suitable size of needle.

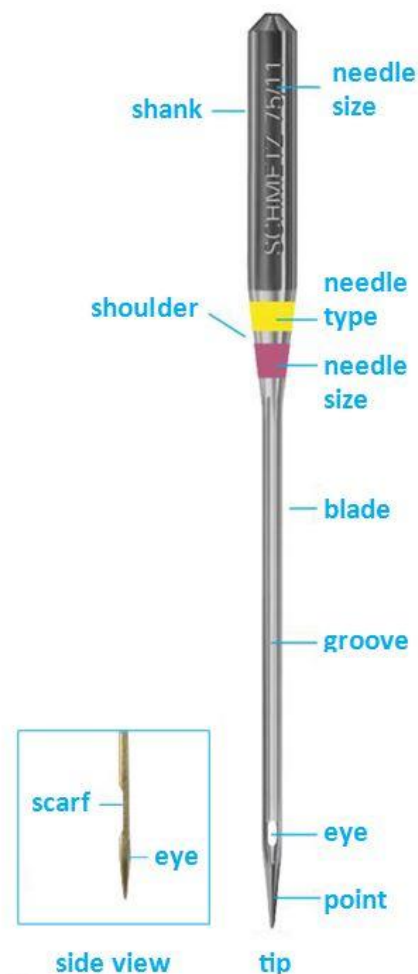
60/8 needle: use with 100 weight silk, polyester, invisible thread

70/10 needle: use with 100 weight threads

80/12 needle: use with 50 weight threads

90/14 needle: use with 40 weight threads

100/16 needle: use with 30 weight threads and thicker



Types of Needles:

The type of needle you choose depends on what you are sewing on.



- **Universal** The needle's point is slightly rounded for use with knit fabrics, but sharp enough to pierce woven fabrics. A good all-rounder.
- **Top stitch** needles have an extra sharp point which will pierce all types of fabric easily and the large eye allows thick top stitching thread to be used.
- **Denim/Jeans** This type of needle has an extra-sharp point and stiff shank, which makes it suitable for stitching denim, heavy imitation leather or other densely woven fabrics
- **Ballpoint** This needle has a blunt, rounded tip that slips between fibres rather than piercing them. Use this needle for sewing coarse knits, lycra and other fabrics that tend to run if you snag them.
- **Microtex/Sharps needles** If you're a quilter working with several layers of cotton and wadding or you're working with densely woven fabrics such as batiks and micro fibre a sharps needle should be used. These needles are designed to work with several layers of fabric thanks to a stronger shaft which helps to avoid bent or broken needles and a sharp point which enables it to penetrate through the fabric and produce smooth buttonholes. A short round threading eye also gives extra strength during sewing.
- **Metallic** – use this needle when sewing with metallic threads. The eye of the needle is slightly bigger than normal to reduce the build up of heat through friction & subsequent thread breakage.
- **Twin needle** Twin needles are constructed with two shafts on a crossbar which extends from a single shank. They're ideal to use for decorative stitching and creating multiple, uniform stitching rows. Two numbers are listed on the packaging; the first number represents the distance between the needles and the second number is the metric needle size.
- **Quilting** – these needles have a tapered point that allows you to stitch through several layers of fabric (usually the quilt sandwich) and across intersecting seams. They have a tapered point to prevent damaging the often heirloom quality fabrics used in quilting. They are generally smaller and stronger than normal needles with a small eye.
- **Wing needles** Used in conjunction with the special stitch options on your machine, wing needles will produce holes in the fabric to replicate drawn thread work. Fabrics made from natural fibres such as cotton should be used with these needles.

- **Leather needles** Leather needles are often known as chisel point needles thanks to a point that looks and acts like a chisel when in use. These needles should be used with genuine leather, suede and difficult to sew projects, but should not be used with PU imitation leather, ultra suede or synthetic suede since the characteristics of these fabrics are quite different to their real counterparts.
- **Embroidery needles** Embroidery needles are designed with a wider eye to allow threads such as rayon, polyester or cotton machine embroidery threads to pass freely and easily when embroidering. Embroidery needles have a pontoon scarf with an oversize bump which reduces the chance of missed stitches by reducing the amount of movement in the fabric.
- **Titanium needles** These are coated with titanium nitrate, making them much stronger and more durable than standard needles. They will last 5-8 times longer than conventional needles. Also, because of the special coating they resist over heating in the eye of the needle. Available in topstitch, overlocker and serger needles.

Replace your needle if it is damaged, blunt or when starting a new project. Not having the correct needle for your thread or fabric may result in tension & sewing issues.

Thread:

In addition to choosing the correct weight of thread for your project, you may also want to consider the different types of thread.

- **Cotton** Suitable for light to medium-weight fabrics which have little or no stretch to them. Cotton thread will not 'give', and the stitches may break if used on a stretchy knit fabric. Commonly used by quilters.
- **Polycotton** This thread is usually labelled 'all-purpose' and is the thread you will see most frequently in fabric shops. It's suitable for all types of fabric and for both hand and machine sewing.
- **Polyester** A very strong thread. Most suitable for synthetic fabrics or fabrics with a lot of stretch to them. The finish of this thread, however, can appear waxy or shiny.
- **Silk** Silk thread is more elastic than cotton, so opt for silk if your fabric has stretch to it. Use on very thin or delicately woven fabrics such as those used for lingerie or sheer garments.
- **Heavy duty** Used for sewing projects that require extra strong and durable stitches, such as upholstery, using very heavy or stiff fabric.

Recommended Needles by Thread Manufacturer

AURIFIL

Thread*	Technique	Needle	Bobbin
12wt	Machine Embroidery & Applique	Top Stitch 100/16	50wt
	Machine Quilting/Art quilts	Top Stitch 90/14	50wt
28wt	Machine Applique	Top Stitch 90/14	50wt
	Machine Embroidery	Microtex or Top Stitch 90/14	50wt
	Machine Quilting	Top Stitch 90/14	50wt
40wt	Machine Embroidery/Piecing/Quilting	Sharps/Microtex Quilting or Denim needle 80/12	40wt or 50wt
50wt	Machine Embroidery/Piecing	Microtex 80/12	50wt
	Machine Quilting	Sharps/Microtex Quilting or Denim needle 80/12	50wt
80wt	Hand Applique/EPP		

* Smaller the weight the thicker the thread

GUTERMANN

Thread*	Technique	Needle	Bobbin
Sew-all (polyester)	Overlocking, buttonholes & buttons, decorative seams	Universal 70-90	
Top Stitch (polyester)	Ornamental stitches, backstitch seams, manual eye buttonholes	Universal 100-120	
Extra Strong (polyester)	Heavy stressed seams & repair work, denim, leather & canvas	Universal 70-100	
Natural Cotton	Overlock and safety seams, underwear buttonholes & buttons, decorative seams	Universal 60-80	
Quilting (cotton)	Hand Quilting		
Silk	Fine closing seams, fine ornamental stitches, buttonholes and buttons	Universal 80	
Metallic (polyamide/polyester)	Decorative stitches, crafting	Universal 100-110	
Elastic (polyester/Polyurethane)	Gathering, crimping, smocking		Use in bobbin only
Linen	Strong & tear resistant, buttons & heavy duty materials – hand sewing only		
Jeans (polyester/cotton)	Darning jeans, overlocking & safety seams	Universal 80-100	