

Using Machine Embroidery Needles

<http://www.embroidery.com>



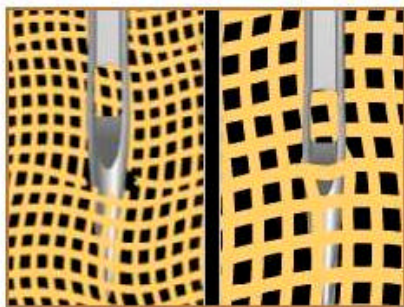
step 1

Embroidery needles have two types of shanks. For home embroidery machines, the shank is round on one side and flat on the other. For commercial embroidery machines, the shank is completely round.



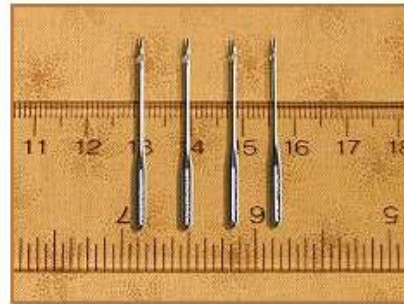
step 3

The needle eye is where the thread passes through. The size of the needle eye corresponds with the size of the needle. It's important to choose the right size of needle with a big enough eye, and also choose a good quality thread.



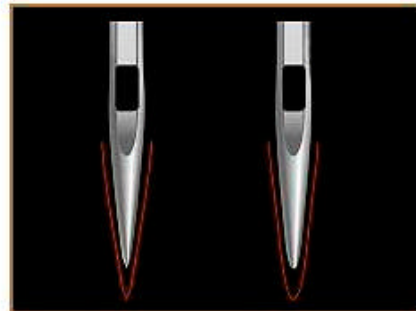
step 5

Sharp needles pierce and cut through the fibers of the fabric. Ball point needles have a slightly rounded point, which slips between the fabric threads, pushing them aside instead of cutting them.



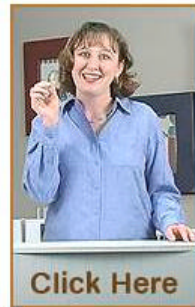
step 2

Needles come in a wide variety of sizes, and are sized according to two systems: American and European. The European number tells you the diameter size of the needle shaft in hundredths of a millimeter.



step 4

There are basically two types of needle points: the sharp point and the ball point. These points are specifically designed to work on different types of fabric. Sharp needles are designed for use with tightly woven fabric such as cotton, denim, or terry cloth. Ball point needles are designed for use on loosely woven fabrics such as knits, piques, and fleece.



[Click Here](#)

Resources:

For an in-depth look at needle knowledge, check out our video: "[How's Your Needle Knowledge](#)" available to view online at Embroidery.com.



Embroidery Machine Needles

Needle Sizes

European Number	American Number
60	8
65	9
70	10
75	11
80	12
90	14
100	16
110	18
120	19



Embroidery Machine Needles

Thread Type → Needle Size

Thread Type and Weight	Needle Size
Rayon (60 Wt.)	9/65 or 8/60
Rayon (40 Wt.) (Including Potpourri, Multi, Melange, and Vari)	11/75 or 80/12
Rayon (30 Wt.)	11/75 or 80/12
Polyester/Polyneon (60 Wt.)	9/65 or 8/60
Polyester/Polyneon (40 Wt.) (Including Neon and Blended)	11/75 or 80/12
Polyester/Polyneon (30 Wt.)	14/90
Metallic (50 Wt.)	11/75
Metallic (40 Wt.) (Including Jewel, Supertwist, Astro, and Twisted Metal)	11/75 or 80/12
Metallic (30 Wt.)	14/90
Metallic (20 Wt.)	14/90 to 16/100
Cotton (50 Wt.)	9/65
Cotton (30 Wt.)	14/90
Wool (12 Wt.)	16/100



Embroidery Machine Needles

Fabric Type → Needle Size

Fabric Type	Needle Size/Point
Delicate/Transparent Fabrics (e.g. lingerie, silk, georgette, organdy, chiffon, tricot, etc.)	9/65 to 10/70 (ballpoint)
Lightweight Woven Fabrics (e.g. dress shirts, linen, cotton, cotton blends, poplin, etc.)	11/75 to 12/80 (sharp point)
Knit Fabrics (e.g. fleece, pique)	11/75 to 12/80 (ball point)
Elastic Fabrics (e.g. Lycra)	11/75 to 12/80 (ball point)
Waterproof/Coated Fabrics	12/80 (sharp point)
Medium-Weight Woven (wool, medium-weight linens, gingham, man-made fabric, fine corduroy, suitings)	12/80 to 14/90 (sharp point)
Active Sportswear/Double Knits	14/90 (ball point)
Heavyweight Fabrics (canvas, heavy denim, vinyl)	14/90 to 16/100 (sharp point)
Leather	10/70 to 14/90 (sharp point or leather point)

Rule of Thumb: The lighter the fabric, the smaller the needle. The heavier the fabric, the larger the needle!