

## MACHINE NEEDLE SIZING

Some people can find the sizing of machine needles a bit confusing, not least because there are two size numbers on each pack. The reason for this is, quite simply, that two sizing systems are commonly in use, Metric and American.

The larger of the two numbers, usually the first, is the metric or European size. This represents the actual width of the needle blade in 100ths of a millimetre; so therefore a size 70 is 0.7 mm, a 90 is 0.9 mm and a 100 is 1 mm and so on.

The smaller number is the American size. This is a purely arbitrary system of sizing numbers, which explains why the conversions vary between different makers. For example Organ size 80 are converted as 11, whereas Schmetz convert as 12.

In both size systems however the larger the number the thicker the needle.

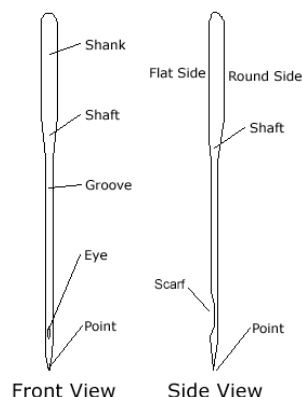
## ROUND SHANK NEEDLES

Old style Jones sewing machines, mostly hand cranked or treadle, but some electric, take a needle with a round, instead of a flat, shank. Although many old machines took lots of different needles, the Jones ones are so common, and were made for such a long time, they are the only ones still readily available. These needles are system DBx1.

### REMEMBER

Changing the needle is the easiest way to improve stitch quality!

## THE ANATOMY OF A SEWING MACHINE NEEDLE



**SHANK.** Modern household needles have a flat sided shank.

**SHAFT or BLADE** The diameter of this determines the needle size.

**GROOVE** This is on the front of the needle. It guides the thread and grips it, allowing the thread to form a loop for the machine hook or shuttle to pick up.

**SCARF** The indentation on the back of the needle above the eye which allows the thread to pass more closely behind the needle to smoothly pick up the thread.

**EYE** The hole through which the thread is passed. Eye shape and size varies with the type of needle.

**POINT or TIP** Length, size and shape of this varies according to needle type

---

© 2015 BECCLES SEWING & HANDICRAFTS  
15A Blyburgate, Beccles, Suffolk. NR34 9TB  
01502 714234  
[info@mailbsh.co.uk](mailto:info@mailbsh.co.uk)  
[www.becclessewing.co.uk](http://www.becclessewing.co.uk)  
Twitter: @becclessewing  
Facebook: beccles sewing & handicrafts



BECCLES  
SEWING &  
HANDICRAFTS



## DOMESTIC SEWING MACHINE NEEDLES

### A Guide to Types & Sizes

By Stephen Taylor

The needle is one of the most important parts of your sewing machine and perhaps the most often overlooked or taken for granted.

Hopefully this guide will help to clarify which are best for the job in hand.

Modern home sewing machines require a needle with a flat side to the shank, a 'scarf', the cut away behind the eye, and a groove down the front. This is designated with the system number 130/705, although they are sometimes also marked 15x1. This is the older designation (although still used in Japan) and relates to the fact that it was introduced, by the Singer Company, in 1879, for their 'Family Central Bobbin' (CB) machine, also known as the model 15. The modern Singer code is 2020.

There are two principal brands of premium machine needles available today, Schmetz and Organ. Schmetz are often recommended for European machines. Organ are supplied with, and recommended by, most far eastern machine makes. Janome needles are made by Organ.

There are a very few models of far eastern machine that won't take Schmetz needles and very few (older) European made machines which won't take Organ, but generally both makes will fit all makes and models. Schmetz produce a wider range of types.

A quality needle, like Organ or Schmetz will last for 6 to 8 hours of sewing, depending on fabric. After that the stitch quality will suffer and it may even damage the fabric. A cheap needle will not last as long.



## Types of Needle

Needle type should be selected according to fabric type and needle size according to thread and fabric thickness.

### Universal Needles. 130/705 H

These are general purpose needles with a slightly rounded point, used to sew the majority of woven fabrics and some knits.

They are available in sizes 60(8), 70(9 or 10), 80(11 or 12), 90(14), 100(16), 110(18). They are also available in assorted packs.

### Jersey/Ball Point Needles 130/705 SUR

Used especially for sewing almost all Knit fabrics and may be used on some fabrics with stretch. These needles have a medium ball point which doesn't damage or break knitted fibres. These are available in sizes 70(9 or 10), 80(11 or 12), 90(14), 100(16) and Assorted.

### Stretch or Super Stretch 130/705 HS (HAX1SP)

For sewing Elastic fabrics, including those containing Lycra or Elastane, these needles have a medium ball point with a specially shaped eye and scarf. These are designed to help prevent skipped stitches on these difficult to sew fabrics, including very stretchy knits.

They come in size 75(11) and 90(14). This is the needle which should be used in the majority of modern overlockers.

### JEANS/DENIM 130/705H-J

Jeans needles, as the name suggests, are particularly intended for stitching denim, a very thick and densely woven material, and consequently very difficult for the needle to pierce. They are also used to stitch other extra thick and/or dense fabrics. The sharp, semi-ball, point and reinforced blade reduce needle deflection and breakage, and skipped stitches. The smaller sizes are also ideal for quilting. Available in 70(10), 80(12), 90(14), 100(16), 110(18).

The shank is colour coded blue.

NB. Do not automatically choose the thickest needle for jeans, it is harder for the machine to push it through the fabric, due to the dense weave, and this will put more strain on the motor.

### MICROTEX (SHARP) 130/705H-M

This type of needle is used for stitching microfibers, silk, coated materials and artificial leather. It has a very slim acute

For perfectly straight stitches when topstitching or quilt piecing. Comes in Sizes 60(8), 70(10), 80(12), 90(14) 100(16) and 110(18).

### TOPSTITCH 130N

Needles with an extra long eye, in order for heavy weight multiple or poor quality threads to run through easily when top stitching. Best results are achieved when using the straight stitch needle plate if your machine has one. Sizes 80(12), 90(14) and 100(16).

### QUILTING 130/705H-Q

Produced especially for machine quilting and piecing, the slightly rounded point has a specially shaped taper. This facilitates easier needle penetration of the work and helps stop skipped stitches. In sizes 75(11) and 90(14).

### LEATHER 130/705H-LL

Leather point needles are made for sewing non-woven materials, principally leather, as the name implies. The cutting tip allows the needle to pass more easily through the work and stops the skipping of stitches which often occurs if a pointed needle is used in this situation. Used for Leather, faux leather (not fabric backed) and heavy non-woven synthetics. **NEVER USE ON ANY WOVENS OR KNITS, it will cut the threads and ruin the fabric.** Sizes 70(10), 80(12), 90(14), 100(16), 110(18).

### EMBROIDERY 130/705H-E

Whether using an embroidery machine, doing free-hand embroidery or fancy stitching, with rayon or other embroidery thread, these are the needles to use. They are made with a light ball point, a wide eye and groove to protect fragile threads from damage. Available in size 75(11) and 90(14).

### EMBROIDERY SPECIAL 130/705 H-ES

Similar to standard embroidery needles but with a special scarf and eye for high speed embroidery machines. I sizes 75(11), 90(14).

### METALLIC 130MET

Needles designed to sew with metallic and other speciality threads. The elongated eye allows delicate threads to pass through more easily, helping to prevent shredding or breaking. Available in sizes 80(12) and 90(14).

### QUICK THREADING 705HDK

These are a special kind of Universal needle with a slip-in threading slot in the eye, for those who find threading needles difficult. Used as ordinary Universal needles and in sizes 80(12) and 90(14).

### WINGED (HEMSTITCH) 130/705H-WING

These have a wing on each side, so that they leave holes in medium weight loosely woven fabrics. This gives the appearance of Turkish hemstitch, or cutwork, in heirloom sewing. Size 100(16) and 110(18).

### COVERSTITCH (SERGER) ELXx705

Designed in cover stitching machines and overlockers which also do cover stitch. They are not suitable for use in sewing or embroidery machines. Size 80(12) and 90(14).

### ORGAN COMBI ASSORTED

A very useful pack of 10 needles, especially if you are starting out or have run low., as it contains all the most popular types & sizes. This pack contains; one Jeans size 90, one Jeans size 100, one Universal size 70, two Universal size 80, two Universal size 90, two Stretch size 75 & one Stretch size 90.

### JANOME BLUE TIP

These Janome exclusive needles are, confusingly, marked with a blue shank, although they are not for denim. They are of a unique design with a pierce point and a longer than normal scarf. They are recommended for problem fabrics, especially synthetics, where they will help to prevent skipped stitches and puckering. Only available in size 75(11).

### JANOME RED TIP

Similar in design to the blue tip but with a larger eye to handle heavier and metallic threads which split easily. Size 90(14) only.

### TWIN & TRIPLE

These needles consist of 2 or 3 needle blades mounted on a single shank to produce 2 or 3 rows of stitching. They are made in Universal, Stretch, Embroidery, Metallic and Hemstitch. They are available in various thicknesses and widths.