

BEGINNERS HOW TO TENSION SWATCHES by Lidia Higson

Recently I have been asked several times about how to knit and measure a tension swatch. I was quite surprised as the knitters were quite experienced knitters, but they asked because they were hoping to knit a fancier and more expensive yarn than the usual acrylic, so obviously they wanted it to work out right the first time. Patterns usually give you a tension for the knitting as eg. 28sts and 40 rows to 10cms, with the tension dial number they used as a guide. Machines vary so if you have enough yarn do 3 tension swatches, the tension number given and one each side of that, not necessarily by a whole number, but by one or two dots.

There are quite a number of different makes, models and gauges of machines and hopefully I will satisfy all.

Fine gauge (3.6mm). Knitmaster/silver Reed and Brother made these. This knits fine yarns such as 2ply and below.

Standard gauge (4.5mm). Brother, Knitmaster/ Silver Reed and Toyota all make or did make a standard gauge, which knitted nicely up to 4ply thickness yarn and also a fine double knit.

Mid Gauge (6.5mm) which knits double knit and Arran.

Chunky (9mm) which knits Double knit, Arran and chunky.

Passap (5mm) which is mainly a double-bed machine and likes to knit 3ply and 2/30's.

The fine gauge swatch. This is knitted over 70 stitches and 60 rows.

Start with 70 stitches and WY and knit 20 rows. RC 000 with MY and stitch pattern knit 30 rows. Mark the 21st each side of '0' by pushing the 21st needle to D/E position and tie a piece of contrast yarn onto the hook. Knit 30 more rows, RC 60. Knit 20 rows with WY and take off machine.

**Gently pull the swatch in the direction of the knitting and leave to relax, preferably overnight. This allows the knitting to go back to its natural condition after being stretched on the machine. If the pattern is for a natural yarn such as wool or alpaca, the pattern might tell you to wash (do this in the detergent you would normally use) and steam or press the swatch. **

The standard gauge swatch. This is knitted over 60 stitches and 60 rows.

Start with 60 stitches and WY, knit 20 rows. RC 000 With MY and MT and stitch pattern knit 20 rows, mark the 21st stitch each side of '0' by pushing the 21st needle to D/E position and tie a piece of contrast yarn onto the hook. Knit 20 more rows again mark the 21st stitch. Knit to RC 60,

Knit 20 rows with WY. Take off machine and treat as ** to **

The mid-gauge swatch. This is knitted over 50 needles and 40 rows.

Start with 50 stitches and WY and knit 15 rows, RC 000 with MY and stitch pattern knit 20 rows, mark the 16th stitch each side of '0' by pushing the 16th needle out and tying a piece of contrast yarn over the hook. Knit another 20 rows RC 40. Knit 15 rows in WY. Take off machine and do as in ** to **

Chunky swatch. This is knitted over 40 needles and 30 rows. Start with 40 stitches and WY and knit 10 rows, RC 000 with MY and stitch pattern knit 15 rows, mark the 11th stitch each side of '0' by pushing out the 11th needle and tying a piece of contrast yarn round the hook, knit 15 more rows RC30, take off on WY. Treat as ** to **.

You have now knitted a swatch, but how do you measure it? Knitmaster, Silver Reed produced rulers, green for fine gauge and standard gauge, yellow for mid-gauge and blue for the chunky gauge. Most of you

will be familiar with the green ruler, but I know many are confused as to how it works. All the rulers work in the same way. (Photo 1526)

The ruler is designed to tell you how many stitches and rows to 10cms, measuring between the two yarn markers on the swatch and the contrast rows, using all the needles.

The ruler has two sides. One side has 'S' which is used for measuring stitches and the other side has 'R' which is used for measuring rows.

So for stitches, use the ruler scale with the 'S' side showing. Place the arrow end of the scale inside the left stitch in contrast yarn, and measure to the inside of the right hand marker. The number will tell you how many stitches are needed to knit 10cms. (Photo 1523)

For rows, use the ruler with the 'R' side up. Place the arrow end at the top of the swatch, just below the rows knitted in contrast yarn. Measure to the inside of the contrast rows at the bottom of the swatch. The number tells you how many rows to 10cms. (Photo 1524)

If you want to check that the scale on the ruler is correct. For the stitches, from one of the markers measure 10cms, put in a pin. Now count the stitches from the marker to the pin. It should correspond with the number given to you by the ruler. For the rows measure 10cms from just under the contrast row, place a pin there and count the rows again that should correspond with the number given by the ruler.

If you have too many rows and stitches you need to knit in a bigger tension, if you have too few stitches and rows then you would need a smaller tension. Sometimes the stitches are right and not the rows or vice versa, then you would need to adjust your tension by one or two dots. When adjusting the tension you will find that moving the tension dial does not always alter both stitches and rows but only one of them. You might need to move the dial twice a dot at a time.

The scale rulers were made to be used with the Knitmaster knit radar, so do not use these for the Brother and Toyota knitleaders. But for finding a tension just for knitting you can use these on all the Japanese machines.

If you want to knit a swatch for every other needle, on all the above machines bring forward the number of needles and push every other one back to NWP. Knit the swatch for the number of rows (you do not need to put in any markers) as instructed. Take off the machine and pull gently in the direction of the knitting or treat as instructed. You cannot use the rulers for these, so measure 10cms and count the stitches and rows. If the swatch measures less than 10cms, measure 5cm, count these and double.

The Passap machine is different. The swatch you knit for stocking stitch is 60 stitches and 100 rows, but you don't mark any needles. As the Passap is a 5mm gauge you cannot use the green ruler. For pattern knitting it is recommended you use a 100 stitches and 100 rows, but you can use the numbers that suit you best for working out. Ann Baker kindly sent these instructions. For each swatch measure the width of all the stitches and the length of the rows.

For this swatch Ann used 60 stitches and 100 rows. Use an ordinary cm measuring tape, to measure the swatch. (Photo's 142842 & 142913)

The 60 stitches measure 29cms and the hundred rows 14.5cms. You will need a calculator. So to work out stitches to 10 cm divide the 60 by 29 = 2.07sts to 1cm, then x 2.07 by 10 = 20.7sts. To work out rows to 10cm, divide 100 by 14.5 = 6.9 rows to 1cm, then x 4.5 by 10 = 145rows to 10cms.

I belong to several on line knitting sites and I have learned that there are many more different gauges of machine that I knew of. For example there is an 6mm and 8mm gauge. For a tension swatch for these you

would need to calculate as for the Passap. Choose numbers that you feel comfortable with such as 50 stitches by 50 rows



