



## Yarn specifications: ‘How thick is a spun yarn?’

Spun yarns have three basic dimensions:

- Diameter or thickness (the ‘count’)
- Looseness or tightness of twist
- Whether single or plied/folded with more than one strand.

Various notations, or systems to describe yarns, have grown up locally with the spinning trade. So there are Yorkshire skeins woollen (YSW), Galashiels Cut, Worsted and Metric (sometimes called New Metric or NM, or also Tex) counts. There is also a Dewsbury count used for carpet yarns.

All of these systems describe the linear density of the yarn, i.e. **directly** how much it weighs for a unit length (as for the Tex system) or **indirectly** how much length of yarn makes a given weight (as for Yorkshire Skein and Worsted counts). Thus the **direct** Tex system gives the mass in grams of 1000 metres of a yarn, so that the value will rise with the thickness of the yarn. However, the indirect Yorkshire Skein and Worsted counts give the length of yarn in yards which weighs one pound.

The **indirect** systems add a further complication in that, rather than just measuring the total length (which could run to a few miles), they use the number of skeins of woollen spun yarn or the number of hanks of worsted spun yarn to make the 1lb weight. For Yorkshire skeins the length of each skein is 256 yards and for Worsted hanks the length of each hank is 560 yards. Thus a 16 YSW yarn will be one of which 16 skeins, each 256 yards long, together weigh 1lb; a 16 Worsted yarn will be one of which 16 skeins, each 560 yards long will weigh 1lb. So the worsted yarn in this example will be roughly half as thick as the woollen yarn. The use of the indirect system means that the higher the number describing the yarn, the finer it will be, which is the opposite of the Tex system. Galashiels skeins are 300 yards, as are linen skeins, while cotton (English) are 840 yards as is spun silk and American

woollen skeins are 100 yards. Dewsbury uses ounces rather than pounds and a one-yard skein. There are conversion tables, thank goodness!

The count is used to describe a single strand of yarn, with the number of plies for plied yarns being more usually given as a first number followed by an oblique line, e.g. 2/16s YSW means a yarn made of two strands of 16 YSW yarn plied together, which would be similar to a single 8 YSW yarn. However, due to the fact that plying slightly undoes the twist in the single strands as they are plied, a plied yarn will not necessarily weigh twice as much as a single yarn.

The **twist** in a yarn may be S- or Z- directional as one looks at it and a plied yarn will usually be twisted in the opposite direction to the twist in the singles comprising it, to create a balanced result which will hang straight without kinking.

Special yarns, with additional twist (such as crepe) or loops (boucle) or with added morsels of coloured, thicker or metal bound into the yarn are also possible.

**Woollen** spinning results in a loose, fluffy and airy yarn, whereas **worsted** spinning results in a tighter, harder, stronger and smoother yarn, due to the additional manufacturing process of combing the fibres into alignment prior to spinning and to a slightly different spinning process.

Either woollen or worsted yarn may be twisted more tightly or loosely, depending on the eventual use – normally a hand-knitting yarn will have a low twist while a weaving yarn, particularly for carpets, will have a high twist. For Yorkshire Skein woollen spinning, the range is from around 1.5 TPI (twists per inch) for a chunky knitting yarn, 3-4 TPI for a Double Knitting yarn to around 6-8 TPI for a weaving yarn for tweed, blankets or suiting. TPM (twists per metre) is also used. Generally, a worsted yarn can have a lower twist for the same diameter because it will be made of longer fibres which have been combed and coiled together during preparation for spinning.

### Approximately equivalent yarn specifications

Metric (NM)	Yorkshire Skein Weight	Worsted	Yards per ounce	Galashiels Cut
1	1.875	0.875	31	2.5
3	5.75	2.75	94	7.5
5	9.75	4.5	155	12.5
7	13.5	6	215	17
9	17.5	8	280	22
11	21.5	10	345	27.5