DIBELLA
LONGLIFE TEXTILES

Dibella Textile Knowledge

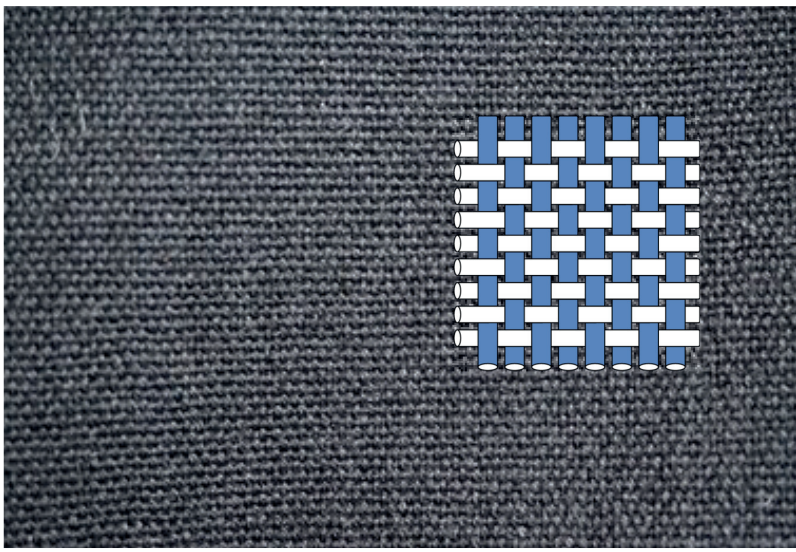
Weave Gauge

In weaving, the term „weave theory“ refers to the study of the systematic intersections of warp and weft threads in fabrics, as a thread intersection is referred to as a weave. The same subject is also dealt with under fabric technology or weave technology.

Basic bindings

The three basic bonds that belong to the systematically constructed bonds with recurring bond rapport and which we would like to describe here are the following:

- Linen weave
- Twill weave
- Atlas weave



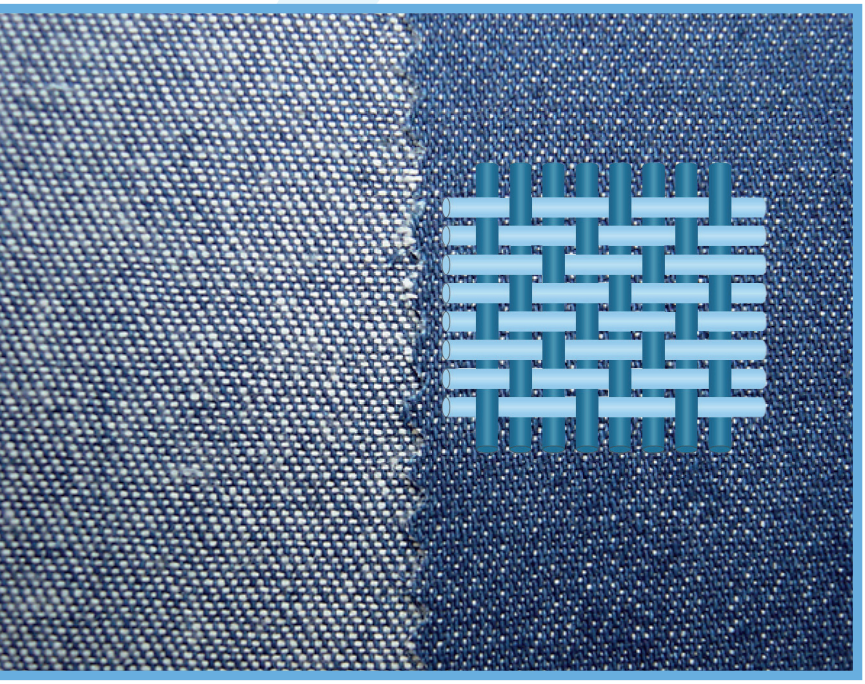
The **plain weave** is the simplest and at the same time closest thread interlacing of warp and weft. The weft thread lies alternately above and below a warp thread. This creates a „chequerboard“ pattern. The even crossing of both thread systems creates two identical fabric sides.

The close interlacing leads to a very firm connection of all threads, so that fabrics in plain weave are therefore (with the appropriate thickness of the yarn used) particularly hard-wearing and abrasion-resistant. Plain weaves are usually firm and dull, have a somewhat „grainy feel“, good air permeability and are very durable with coarser yarns. Depending on the yarn count, the plain weave allows for a relatively low fabric weight.

A cover made of batiste, for example, feels light but is still so tightly woven that no down can get through. Fabrics in plain weave are also well suited for bed linen, such as Renforcé or Linon. Almost all sheets in the Dibella range are plain weave.

The **twill weave** is also known as „twill“. The twill weave is characterised by a slanted ridge. The best-known fabric in twill weave is denim, the blue and white jeans fabric. If the ridge runs from top left to bottom right, it is called an S-ridged twill; if it runs from bottom left to top right, it is a Z-ridged twill, corresponding to the orientation of the middle part of the two letters. The weaver calls the upper side when weaving on the machine or loom the „right fabric side“.

If the warp threads predominate in the upper area, it is called a warp twill. Denim, for example, is a warp twill: the warp is blue, the weft white. On the loom, denim is woven so that the bluer side is on top. With a weft twill, on the other hand, it is the case that the weft threads are predominantly on the top side. Due to the diagonal weave structure, the twill weave is a particularly tear-resistant, dense and robust type of weave, provided a strong yarn is used. This type of weave is therefore perfect for trouser fabrics such as denim.

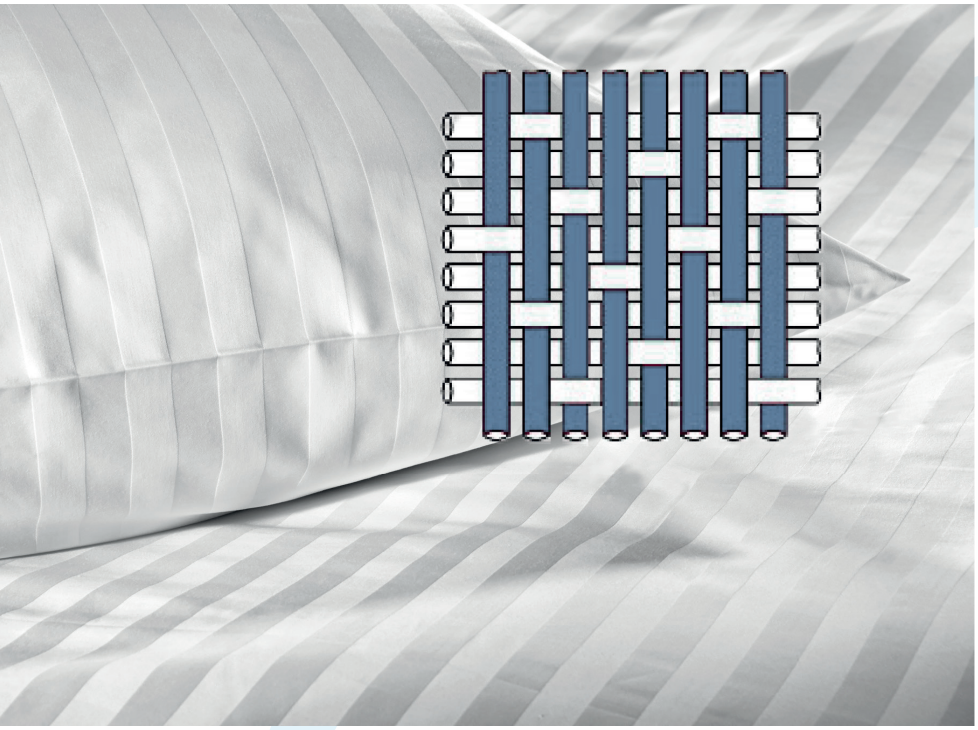


In addition to denim, tweed, for example, is also produced in twill weave. Depending on the thread density and material, twill can be hard-wearing, loose, smooth or particularly soft. Twill weave is also used, for example, in the production of drell, a common cover fabric for mattresses. Dibella‘s range includes the fitted sheet RSM 58, which is woven in twill weave. As described above, RSM 58 is characterised by its particularly high durability.

Atlas weave, also known as satin weave, is the third basic weave alongside plain weave and twill weave. Due to its special properties, it is used in almost the entire Dibella bed linen range.

The weave repeat of the atlas weave is at least five weave, i.e. five warp threads and five weft threads in the repeat. The characteristic feature is that the binding points do not touch each other diagonally, horizontally or vertically, because the next thread intersection is only two or more warp and weft threads away and therefore all threads float relatively long, can push together and almost completely cover the binding points. This results in an even and smooth fabric surface. Woven fabrics in atlas ground weaves can have higher warp and weft densities than those woven in plain weave and twill weave. Depending on whether there are more warp or weft threads on the right side of the fabric, it is referred to as warp or weft atlas. The satin weave is an uneven weave.

The fabrics with atlas weave have a higher fullness and suppleness due to their significantly higher thread density compared to those with plain weave and twill weave. And - due to the few weave points, the weave allows the natural sheen to come to the fore more effectively.



A characteristic feature of fabrics in atlas weave is their smooth and even surface. The fabrics drape elegantly and have a supple feel. Their smooth surface results from the fact that warp and weft do not touch each other at any points in the fabric.

Quellen: Textil-Trainer.de, Wikipedia.de