

## Bow Strings

The Archery Trade Association (ATA) specifies that a Traditional Bowstring should be labelled and sold by the length of the bow not the bowstring length itself. A 60" Bowstring is for a 60" bow, not the length of the bowstring. A Traditional bow is measured from string groove to string groove around the curve of the bows limbs, not directly from tip to tip. This measurement does not go into the curve of the handle but across the face of the bow limbs from string groove to string groove. This will give you the approximate length of the bow.

A Bowstring for bows over 40 lbs is measured by placing it over steel pegs and stretching it at 100 lbs of tension for 20 seconds. The measurement is taken from the outside of each peg. ATA Specs say that a bow should be properly braced with a string that measures 3" shorter than the bow. If a bow is 60" it should be braced properly with a string measuring 57" under 100 lbs of tension after 20 seconds. Bowstrings for bows of less than 40 lbs should be measured in the same manner, using 50 lbs of tension.

Bow Makers used a Bowstring Master Set of steel cables that would be designated as AMO (now ATA) Bow Lengths such as AMO 66" (bow length) but it would have an actual length of 63 " under 100 lbs of tension. If this cable should brace a bow correctly it would be classified a 66" bow. A Bowstring Master Set would range from 45" to 69" and would brace bows from 48" to 72".

A Dacron Bowstring, which will stretch almost an inch under 100 lbs of tension, will look 'out of the package' like it is 4 inches shorter than the bow. This is the reason you hear people speak about bowstrings being 4 inches shorter than the bow length. This will only be for a Dacron bowstring and not under tension or actual length.

Because all materials stretch differently, measuring everything under pressure compensates for the differences between materials. The newer materials, like Fastflight do not stretch like Dacron, so they will look longer out of the package and more like the three inches according to ATA Standards. Strings are supposed to be measured with out any twist at that time. However strings are installed with some twists to give better performance and by twisting and archer can achieve better arrow flight. Some modern archers shoot with as many as 50 twists in a 70" bowstring. To get the proper length bowstring after twisting 50 twists you may have to start with a bowstring 1" longer. Strings that have been shot a long time and need to be changed will probably look longer than when they were new so going by the bow length is a more consistent starting reference.

Strings can be twisted to change their length and this can be done to change the bow set up so it performs better for each individual archer. This will help get better flight characteristics for the arrow; this is called tuning your setup or getting all parts working best together.

### Traditional Bows:

Traditional bows are somewhat easier. This is the procedure I use for them.

1. If the bow has a bow length written on it such as AMO 60" then you can use that as your bow length.
2. If the bow doesn't have a bow length written on it or you want to make sure the bow length that is written on the bow is correct then you can measure the bow as follows. Measure the bow on the belly side from nook groove to nook groove, following the contour of the bow. This is the correct way to measure bow length.
3. From the bow length subtract 4" if it is a recurve and 3" if it is a longbow. This is the string length you will need to start with. Two examples are a 60" recurve would take a 56" string, a 64" longbow would take a 61" string.

Keep in mind these are just starting points for string lengths and once you install a string you may have to adjust string length to get the desired brace height. The majority of the time though the string will be right.

