



# Standard Guide for Center Serving Diameter Dimensions for Archery Bow Strings<sup>1</sup>

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## 1. Scope

1.1 This guide covers the formulation of preliminary guidelines for the outside diameter dimensions of the center servings for the shooting strings for archery bows.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

## 2. Terminology

### 2.1 Definitions of Terms Specific to This Standard:

2.1.1 *bow string, n*—special multi-strand cord that spans an archery bow from end to end and is used to engage the rear end of an arrow in order to launch it into flight.

2.1.2 *bow string material, n*—strands of various materials, both natural and synthetic, from which bow strings are made.

2.1.2.1 *Discussion*—Most bow strings today are manufactured from synthetic materials that have superior strength and resistance to wear and atmospheric conditions. Difference in the tensile strength of the materials is responsible for a difference in the size and number of the strands in a bowstring. In addition, difference in the force necessary to draw various bows may dictate varying numbers of strands of a given material to provide adequate strength for satisfactory service. The material used for wrapping to create a center serving is available in several sizes or diameters. This, combined with variation in the number of strands used to make the main string, permits adjustment of the outside diameter of the center serving within reasonable limits so that standardization is practical.

2.1.3 *center serving, n*—wrapping of twisted or braided line, or monofilament material, that is placed on the bow string near its center.

2.1.3.1 *Discussion*—This wrapping covers the area where the nock of the arrow engages the bow string. It is used to resist

the abrasive wear of repeated shots and also to provide a proper fit with the slot of the nock.

2.1.4 *draw weight of the bow, n*—peak or maximum force required to draw the bow string of a bow from its position at rest (brace height) to the full draw position.

2.1.5 *nock, n*—slot, or a special fitting that contains a slot, that is positioned at the rear end of an arrow to engage the bow string.

2.1.5.1 *Discussion*—The slot maintains secure contact with the bow string while the bow is being drawn, and also during the release of the string and the return of the string to its original position before being drawn.

2.1.6 *string groove width or slot throat dimension, n*—narrowest portion of the slot opening in the nock, usually located near the open end of the slot.

2.1.7 *string hole size, n*—dimension at the bottom or base of the nock slot.

2.1.7.1 *Discussion*—This is the area where the bow string sits when it is seated in the slot.

## 3. Significance and Use

3.1 This guide is not meant to be all inclusive since there are, and will continue to be, special circumstances that will dictate the use of nonconforming dimensions. These special circumstances and the requirements that they establish cannot be totally anticipated and therefore must be treated individually.

3.2 These guidelines are based on an analysis of presently used materials for the manufacture of bow strings and the strength requirements dictated by archery bows falling within a draw weight range of 0 to 100 lb (0 to 444.8 N).

3.3 These guidelines also address the desirability of proper fit of the arrow nock to the center serving.

## 4. Fit of the Nock on the Center Serving

4.1 *Preferable Fit*—While there are some instances where the practice is not followed, the majority of archers prefer that the nock of the arrow be retained on the bow string with a slight “snap-fit.” This is mandatory when the archer uses a mechanical device to hook onto the string to draw the bow, and to aid in releasing the string to launch the arrow. The

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