

# Pi Tape Instructions

Place the magnet of the pi tape on a blade reel.

Make sure that the magnet does not extend beyond theoretical line drawn between two blades.



Keep tension on the pi tape as you rotate the reel and wrap the pi tape around the reel.



Make sure that you wrap it in a straight line so that the end of the tape lines up with the beginning of the tape and that the edge of the tape lines up with the vernier line.

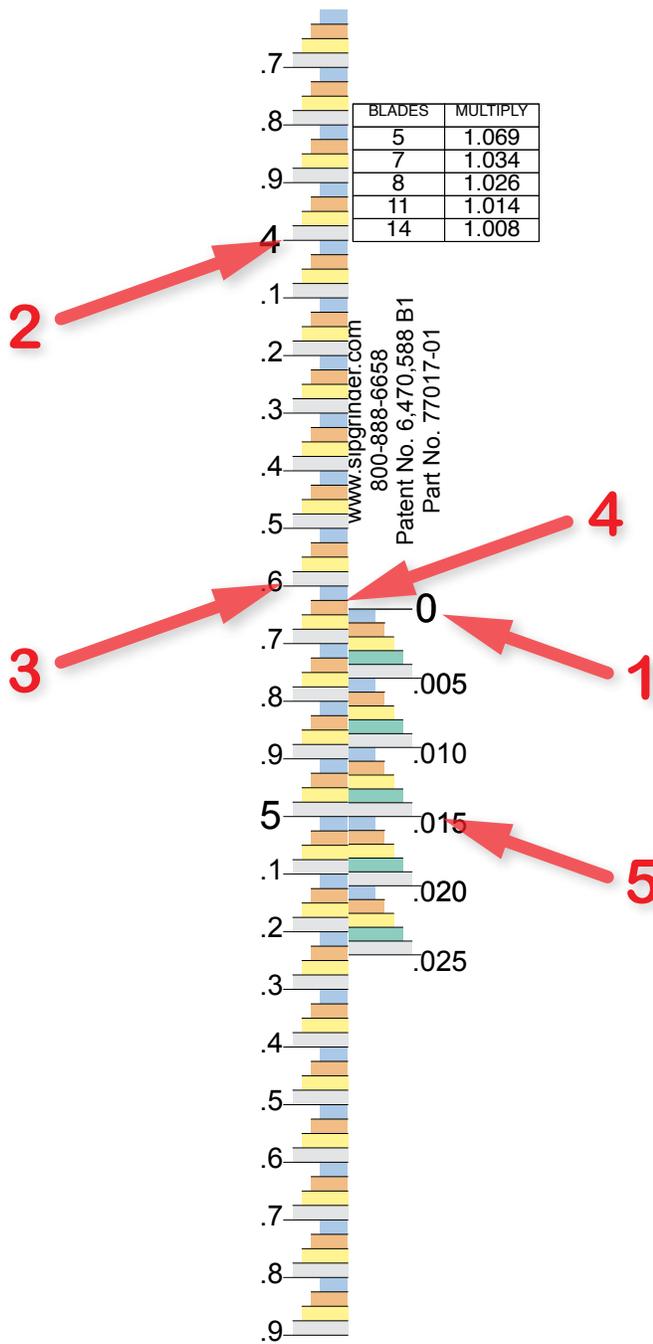


## Reading the Pi Tape

The pi tape measures the diameter of a reel by wrapping around the circumference. It is calibrated so that each inch is 3.142 inches long or pi ( $\pi$ ) inches long. This will automatically convert the circumference into a diameter.

The pi tape also has a vernier, which makes it capable of measuring the diameter of the reel to .001 inches.

Make sure that the pi tape is tight and straight.



**1** Locate the zero (0) on the right side or vernier side of the pi tape. Read the measurement just above the zero.

**2** Each large numbered line is 1 inch. Here the last large number before the zero is 4 inches.

**3** Each small numbered line is .1 inches. Here the last small number before the zero is .6 inches.

**4** Each small line without numbers is .025 inches. Here the the last line before the zero is .025 inches. The basic reading at the left would then be 4.625.

**5** To read the vernier, find the two lines that best line up and read the number on the right side or the vernier side. This would be .015 inches in the illustration on the left.

Add them together and get your final measurement of 4.640 inches.

To measure the cone shape of the reel, you would measure each end of the reel and subtract the difference.

To find the actual diameter of the reel to see if it is too small, take your smallest reading and multiply it by the factor in the table for the number of blades on the reel. For an eleven bladed reel and the above reading:

$$4.640 \times 1.014 = \text{Ø } 4.705 \text{ inches}$$

<b>2</b>	4.000
<b>3</b>	.600
<b>4</b>	.025
<b>5</b>	+ .015
	4.640