

# Beaded Strand System



**Beaded Strand System (BSS™)** is a repeatable and controlled process for creating a homogenous, undifferentiated spherical bead at the end of a strand, cable, or wire rope. The bead of this system provides a secure attachment point without the need to incorporate external hardware - eliminating undesirable weight or friction in a system. With precision tooling, the size of this beaded end can be accurately controlled to meet high tolerance requirements for a wide array of applications.



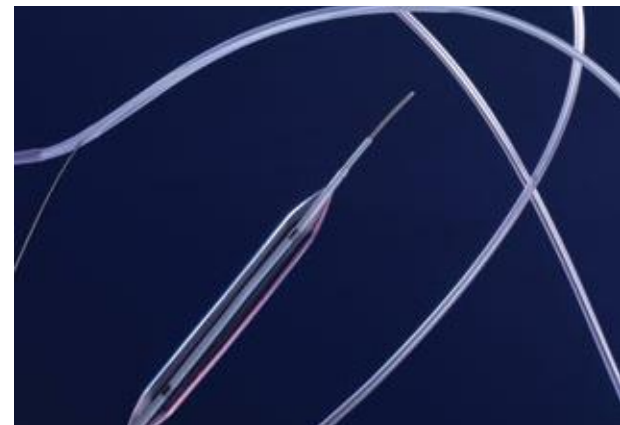
## APPLICATION

Having a superior mechanical advantage, the bead can be received into a mating pocket and act as a push-pull wire or ball joint. The round feature can prevent tears and scratches on part surfaces that it may come in contact with during application or assembly. Common applications include:

- Robotic arms
- Angioplasty Guidewires
- Endoscopes
- Fluoroscopy
- Steerable Catheters
- Upper Limb Prosthetic

## BENEFITS

- Streamline biocompatibility applications as the beaded end is formed from its source material.
- Reduce costs and lead time through simplifying product supply chain and minimal scrap rate.
- Bead diameters are easily modified since all processing occurs in house.
- Allow bead formation without machined secondary terminals.
- Metallurgical bond produces reliable tensile properties.

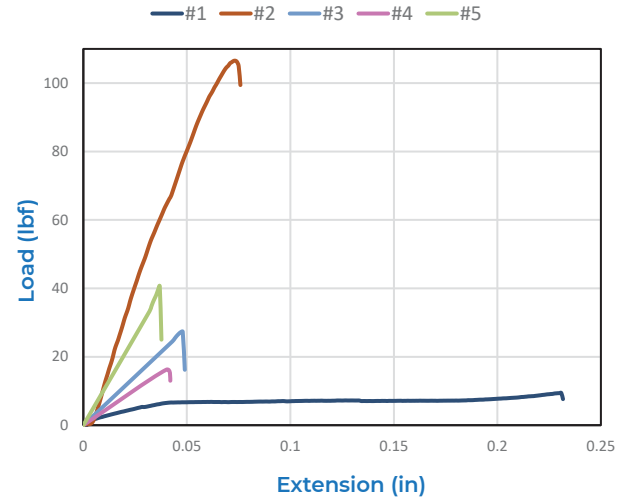


Mission : To be the most innovative, highest quality mechanical wire and cable assembly partner. To advance social and scientific progress through medical device, aerospace and other technologies.



## BSS™ SAMPLE DATA

#	Material	Construction	Diameter (in)	Bead End Diameter (in)	Breaking Strength (lbf)
1	Nitinol	1x7	0.012	0.020	9.4
2	304 SS	1x7	0.030	0.045	106.6
3	304 SS	1x7	0.018	0.020	27.3
4	Tungsten	8x19	0.018	0.036	16.2
5	Tungsten	7x37	0.027	0.043	40.6



## ADDITIONAL FEATURES

- All processing performed in ISO class-7 clean room.
- Optional passivation per ASTM A967 and ultra-sonic cleaning.
- Packaged clean ready for use in your clean room facility.
- Process capability analysis available at request.
- Where applicable, secondary processing can be employed to increase tensile strength.

## CONSTRAINTS

- Maximum bead diameter limited to approximately 2.5x base material diameter.
- Tensile strength reduction to approximately 40-60%, and up to 80% for certain process techniques, relative to breaking strength of cables.

**Strand Products, Inc.** is a world leader in the design and manufacture of innovative high tolerance mechanical wire and stranded cable assembly. Assemblies utilize stranded and single filar wire from  $\varnothing.0004''$  to  $\varnothing.375''$  in diameter. Materials include Nitinol, Stainless, Tungsten, Elgiloy, Inconel, Brass, and various polymers. Industries include medical, aerospace, automotive, and defense. In-house capabilities include design, testing, process validation, cleanroom assembly, crimping, swaging, laser & plasma welding, passivation, barcoding and packaging. Certifications held include AS9100 ISO9001:2015, QML-6117, FDA, and ITAR. To learn more, please visit [www.strandproducts.com](http://www.strandproducts.com)