

### **Slotted Hex Jam Nuts 43M PSI**

Earnest Machine Products line of 43,000 psi Slotted Hex Jam Nuts are designed to provide added resistance to thread stripping as compared to standard low carbon steel slotted hex jam nuts.

Note that "jam" style nuts are designed for use in applications that are subjected to shear loading. If the application requires the development of clamp loads in the fastener or if high tensile loads are going to be encountered then the use of full thickness nuts is recommended.

The slot width and depths are manufactured to provide clearance for full engagement of cotter pins or wires and to ensure that maximum resistance to loosening is achieved.

The material and hardness requirements specified for the 43M PSI line of slotted jam nuts are the same as specified by SAE J995 for Grade 5 nuts.

<b>Material</b>	Carbon (C)	Manganese (Mn)	Phosphorus (P)	Sulfur (S)
	Max	Min	Max	Max
	0.55	0.30	0.05*	0.15**

\* Phosphorus content may be .13 for Acid Bessemer Steel

\*\* Sulfur content may be .23 max, or Sulfur may be .35 max and Phosphorus .13 max provided Manganese is .70 min

<b>Hardness</b>	Rc 32 max
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The Society of Automotive Engineers (SAE) standard for Hex Nuts (SAE J995) does not specify strength levels for Slotted Hex Jam Nuts. This standard does establish a relationship between the minimum Proof Load Strength of Hex Nuts, Slotted Hex Nuts and Hex Jam Nuts.

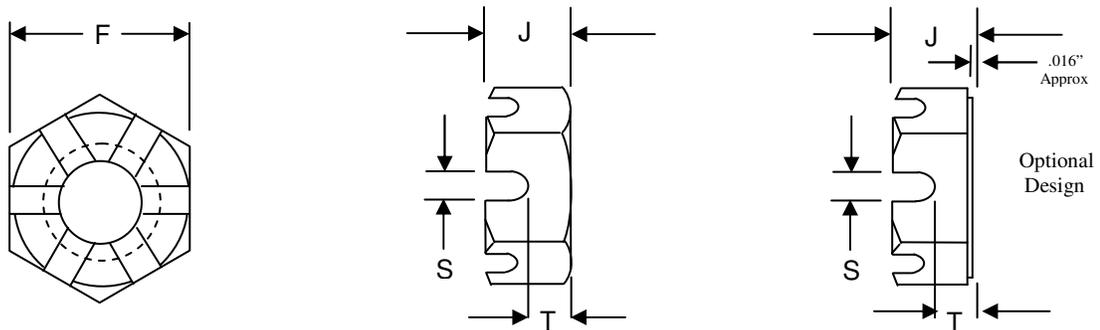
Per SAE J995 the minimum Proof Load Strength of a Jam Nut is 60% of the Proof Load Strength of a Full Size Nut (when made to ANSI B18.2.2 dimensional requirements). This standard also establishes a relationship between the minimum Proof Load Strength of a Full Thickness Nut and a Slotted Full Thickness Nut. Slotted Full Thickness Nuts have a minimum Proof Load Strength of 80% of the Full Thickness Nut.

For a Slotted Jam Nut, the depth of the slot is a higher percentage of the nut thickness than it is for a Full Size Slotted Hex Nut. This ensures that the walls of the slot on a Slotted Jam Nut can fully engage a cotter pin. The slot depth of a Full Size Hex Slotted Nut is approximately 65% of the nut thickness. The slot depth of a Slotted Jam Nut is approximately 50% of the nut thickness. This results in the unslotted length of a Slotted Jam Nut being approximately 75% deeper than the unslotted length of a Full Size Slotted Nut.

Using these same relationships between a Hex Jam Nut and a Slotted Hex Jam Nut, the minimum Proof Load Strength for a Grade 5 Slotted Jam Nut would be:

Size (per SAE J995)	Minimum Proof Load Strength		
	Hex Jam Nut for Slotted	Reduced for Depth of Slot	Reduced
1/4" to 1" Coarse Thread (UNC)	72,000 psi	57,600 psi	43,000 psi
1/4" to 1" Fine Thread (UNF)	65,000 psi	52,000 psi	36,000 psi
1 1/8" to 1 1/2" Coarse Thread (UNC)	63,000 psi	50,400 psi	40,000 psi
1 1/8" to 1 1/2" Fine Thread (UNC)	57,000 psi	45,600 psi	30,000 psi

Earnest Machine Products does not lower the strength of Slotted Jam Nuts for Fine Threads or Large Diameters, a minimum Proof Load Strength of 43,000 psi is maintained for all the sizes carried.



Size UNC and UNF	Width Across the Flats (F)	Thickness (J)	Unslotted Thickness (T)	Slot Width (S)
	Nom	Nom	Max	Min
<b>1/2</b>	3/4	5/16	.18	.15
<b>5/8</b>	15/16	3/8	.20	.18
<b>3/4</b>	1 1/8	27/64	.23	.18
<b>7/8</b>	1 5/16	31/64	.26	.18
<b>1</b>	1 1/2	35/64	.30	.24
<b>1 1/8</b>	1 11/16	39/64	.33	.24
<b>1 1/4</b>	1 7/8	23/32	.38	.31
<b>1 3/8</b>	2 1/16	25/32	.41	.31
<b>1 1/2</b>	2 1/4	27/32	.44	.37
<b>1 3/4</b>	2 5/8	31/32	.52	.43
<b>2</b>	3	1 3/32	.59	.43