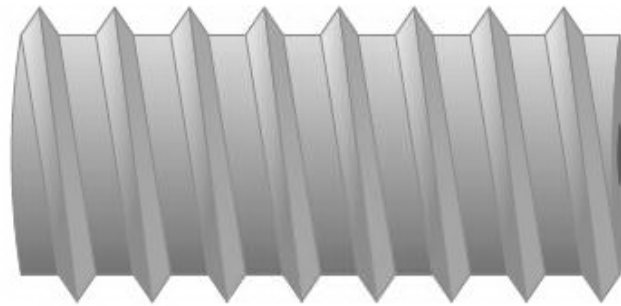
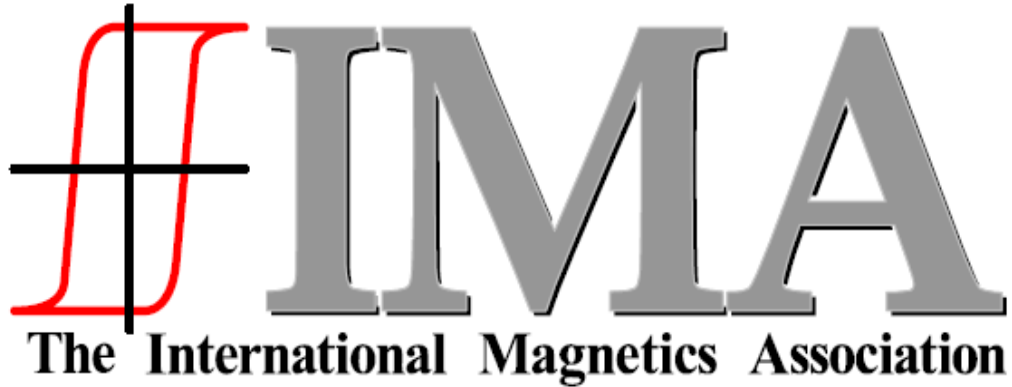


IMA-STD-120 2011.03



Standard Specifications for
Ferrite Threaded Cores

The International Magnetics Association

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FOREWORD

This standard on ferrite threaded cores was developed by the engineering committee of the Magnetic Materials Producers Association, Soft Ferrite Division. The dimensions and tolerances are based on IEC Publication 211 "Dimensions of Screw Cores Made of Ferromagnetic Oxides" and its supplement IEC 221A.

ISO Recommendation: R370 was used in the conversion of dimensions from millimeters to inches.

This ferrite threaded core standard is an advisory document and its use or adaptation is entirely voluntary.

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STANDARD SPECIFICATION FOR FERRITE THREADED CORES

1.0 Scope

This standard defines a series of ferrite threaded cores (screw cores), and their dimensions and tolerances. A visual acceptance specification is also set forth.

2.0 Preferred Dimensions for Threaded Cores

(All dimensions are stated in inches).

2.1 Thread Pitch

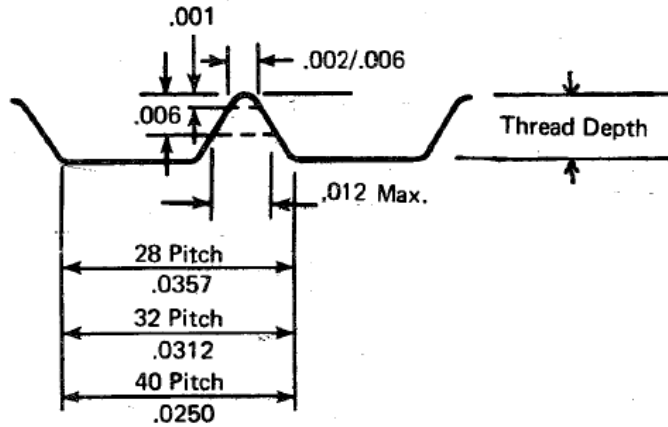


Figure 1 Thread Profiles and Dimensions

Thread Pitch	Thread Depth	
	Shallow	Deep
28	.008/.012	.011/.017
32	.006/.010	.010/.014
40	.006/.010	.010/.014

NOTE: Thread Pitch = Threads per inch.

2.2 Diameters and Lengths

2.2.1

Cores Size	Typical Diameters	Max. Length	Preferred Thread Pitches
#6	.128 to .132	.437	32
#8	.157 to .161	.625	32
#10	.177 to .183	.875	32
1/4	.241 to .249	1.500	28,40
5/16	.298 to .305	1.500	28

2.2.2 Diameters are varied to suit individual torque requirements.

2.2.3 Diameter tolerance is $\pm .001$.

2.2.4 Core length tolerances:

Length: Less than .750: $\pm .015$

.075 or greater: $\pm .031$

2.3 Drive Configuration and Dimensions

2.3.1 #6 Threaded Cores (See Figures 2 and 3)

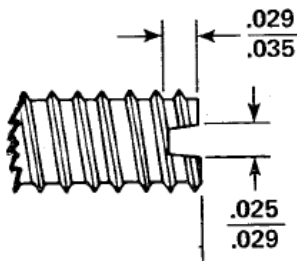


Figure 2 Cross Slot

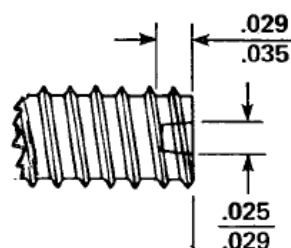
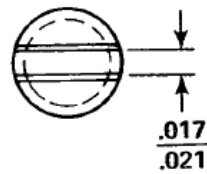
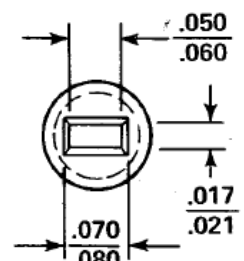


Figure 3 Captive Rectangular Slot



2.3.2 #8 Threaded Cores (See Figures 4, 5, and 6)

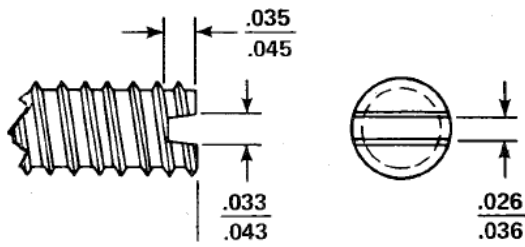


Figure 4 Cross Slot

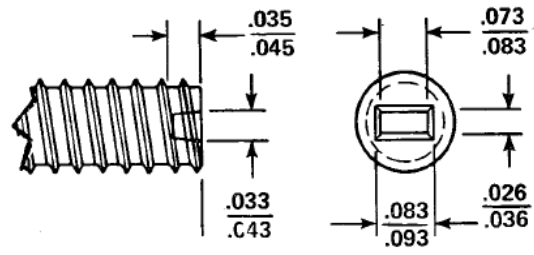


Figure 5 Captive Rectangular Slot

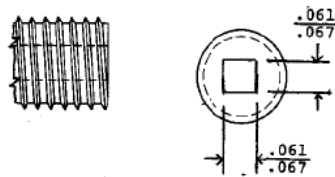


Figure 6 Full Length Square Slot

2.

3.3 #10 Threaded Cores (See Figures 7 and 8)

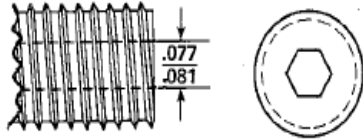


Figure 7 Full Length Hexagonal Slot

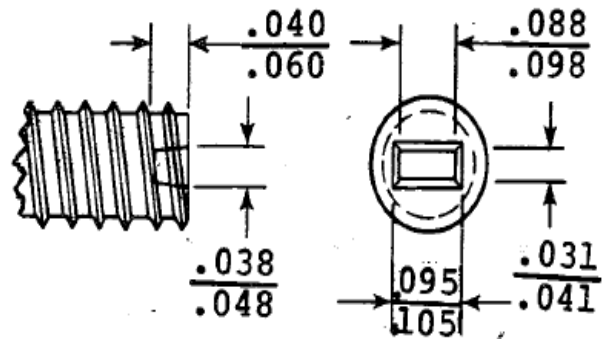


Figure 8 Captive Rectangular Slot

2.3.4 1/4 and 5/16 Threaded Cores (See Figures 9 and 10)

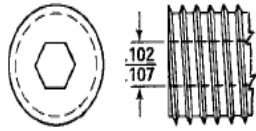


Figure 9 Full Length Hexagonal Slot

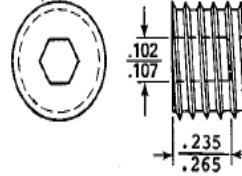


Figure 10 Captive Hexagonal Slot

3.0 Breaking Torque for Hexagon Slot Cores

3.1 Breaking torque is to be measured on a suitable fixture using equilateral hexagonal pins (See 3.2). Pins are to be inserted .187 into each end for cores .375 and longer and equally into each end for cores shorter than .375.

Torque shall be applied smoothly at a rate not to exceed one radian per second.

3.2 Minimum breaking torque, measured in inch-ounces, shall be:

Core Size	Hexagonal Pin Size	MnZn Ferrite	NiZn Ferrite
#10	.0767 to .0769	10	6
1/4	.1017 to .1019	15	9
5/16	.1017 to .1019	18	11

4.0 Surface Conditions and Appearance of Threaded Cores

4.1 Cleanliness

Surfaces of threaded cores shall be free of foreign matter. Stains or discolorations which do not affect performance of the threaded cores are allowed.

4.2 Appearance of Threaded Cores

4.2.1 Length of chips on ends shall not exceed 20% of diameter of core. (See Figure 11)

4.2.2 Longitudinal chips shall not exceed 20% of length of core, or include more than four consecutive threads. (See Figure 11)

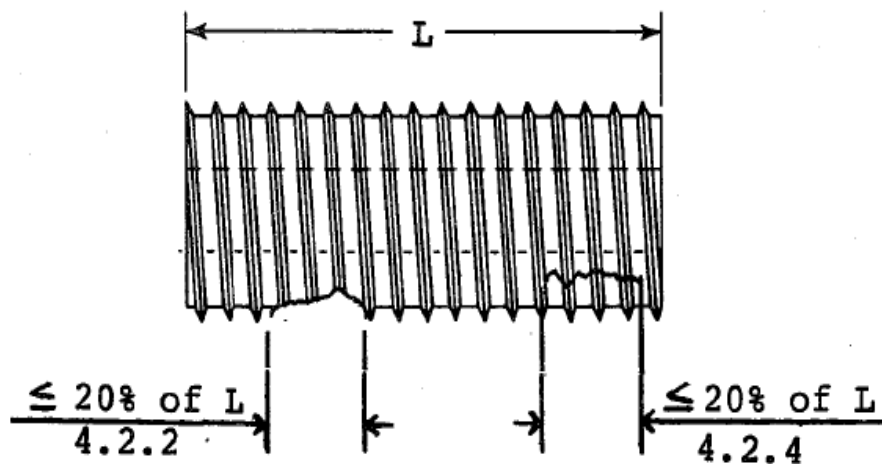
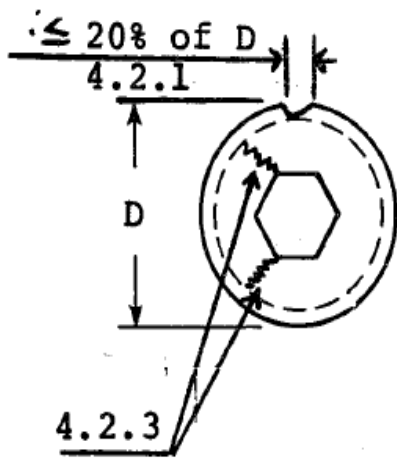


Figure 11