

Threaded Insert Size Chart

Tip: Set your PDF viewer to "Actual size" before printing to maintain scale.

Metal Insert Sizing (HeliCoil & Key-Locking)

Internal Thread Size	HeliCoil Hole Size	HeliCoil Tap Size	Key-Locking Hole Size	Minimum Depth
#4-40	#32 (0.116")	4-40 STI	15/64" (0.234")	3/8"
#6-32	#27 (0.144")	6-32 STI	17/64" (0.266")	7/16"
#8-32	#21 (0.159")	8-32 STI	19/64" (0.297")	1/2"
#10-24	#10 (0.194")	10-24 STI	21/64" (0.328")	9/16"
#10-32	#4 (0.209")	10-32 STI	21/64" (0.328")	9/16"
1/4"-20	#3 (0.213")	1/4-20 STI	25/64" (0.391")	5/8"
1/4"-28	#1 (0.228")	1/4-28 STI	25/64" (0.391")	5/8"
5/16"-18	Q (0.332")	5/16-18 STI	31/64" (0.484")	3/4"
5/16"-24	I (0.272")	5/16-24 STI	31/64" (0.484")	3/4"
3/8"-16	Y (0.404")	3/8-16 STI	19/32" (0.594")	7/8"
3/8"-24	25/64" (0.391")	3/8-24 STI	19/32" (0.594")	7/8"
1/2"-13	17/32" (0.531")	1/2-13 STI	25/32" (0.781")	1-1/8"
1/2"-20	29/64" (0.453")	1/2-20 STI	25/32" (0.781")	1-1/8"

Wood Insert Sizing

Internal Thread	Hole Size (Hardwood)	Hole Size (Softwood)	Minimum Depth	Insert Length Options
#6-32	7/32" (0.219")	13/64" (0.203")	7/16"	3/8", 1/2"
#8-32	1/4" (0.250")	15/64" (0.234")	1/2"	1/2", 5/8", 3/4"
#10-24	9/32" (0.281")	17/64" (0.266")	9/16"	1/2", 5/8", 3/4"
#10-32	9/32" (0.281")	17/64" (0.266")	9/16"	1/2", 5/8", 3/4"
1/4"-20	11/32" (0.344")	21/64" (0.328")	5/8"	5/8", 3/4", 1"
5/16"-18	13/32" (0.406")	25/64" (0.391")	3/4"	3/4", 1", 1-1/4"
3/8"-16	1/2" (0.500")	15/32" (0.469")	7/8"	7/8", 1", 1-1/4"
1/2"-13	5/8" (0.625")	19/32" (0.594")	1-1/8"	1", 1-1/4", 1-1/2"

Important Notes

- **STI** = Screw Thread Insert tap (required for HeliCoil - standard taps won't work)
- **Key-locking inserts** require broaching keyways after drilling
- **Minimum depth** = 1.5x bolt diameter for full strength
- **Wood inserts:** Use smaller hole size in softwoods to prevent loosening
- Always test installation in scrap material before production

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