

Tool Diam.	Tap size	NF/NC UNF/UNC	Threads per inch	Basic major dia (inches)	Basic effective dia (inches)	Basic minor dia of ext. threads (inches)	Basic minor dia of int. threads (inches)	Drill size
.040	0-80	UNF	80	.0600	.0519	.0447	.0465	3/64
.050	1-64	UNC	64	.0730	.0629	.0538	.0561	#54
.060	2-56	UNC	56	.0860	.0744	.0641	.0667	#50
	2-64	UNF	64	.0860	.0759	.0668	.0691	#50
.080	4-40	UNC	40	.1120	.0958	.0813	.0849	#43
	4-48	UNF	48	.1120	.0985	.0864	.0894	#42
	5-40	UNC	40	.1250	.1088	.0943	.0979	#38
	5-44	UNF	44	.1250	.1102	.0971	.1004	#37
.098	6-32	UNC	32	.1360	.1177	.0997	.1042	#36
	6-40	UNF	40	.1360	.1218	.1073	.1109	#33
.120	8-32	UNC	32	.1640	.1437	.1257	.1302	#29
	8-36	UNF	36	.1640	.1460	.1299	.1339	#29
.135	10-24	UNC	24	.1900	.1629	.1389	.1449	#25
	10-32	UNF	32	.1900	.1697	.1517	.1562	#21
.180	1/4-20	UNC	20	.2500	.2175	.1887	.1959	#7
	1/4-28	UNF	28	.2500	.2268	.2062	.2113	#3
.240	5/16-18	UNC	18	.3125	.2764	.2443	.2524	F
	5/16-24	UNF	24	.3125	.2854	.2614	.2674	I
.290	3/8-16	UNC	16	.3750	.3344	.2983	.3073	5/16
	3/8-24	UNF	24	.3750	.3479	.3239	.3299	Q
	7/16-14	UNC	14	.4375	.3911	.3499	.3602	U
	7/16-20	UNF	20	.4375	.4050	.3762	.3834	25/64
.372	1/2-13	UNC	13	.5000	.4500	.4056	.4167	27/64
	1/2-20	UNF	20	.5000	.4675	.4387	.4459	29/64
	9/16-12	UNC	12	.5625	.5084	.4603	.4723	31/64
	9/16-18	UNF	18	.5625	.5264	.4943	.5024	33/64
.490	5/8-11	UNC	11	.6250	.5660	.5135	.5266	17/32
	5/8-18	UNF	18	.6250	.5869	.5568	.5649	37/64
.595	3/4-10	UNC	10	.7500	.6650	.6273	.6417	21/32
	3/4-16	UNF	16	.7500	.7094	.6733	.6823	11/16
	7/8-9	UNC	9	.8750	.8028	.7387	.7547	49/64
	7/8-14	UNF	14	.8750	.8286	.7874	.7977	13/16
	1-8	UNC	8	1.000	.9188	.8466	.8647	7/8
	1-12	UNF	12	1.000	.9459	.8978	.9098	59/64
	1 1/8-7	UNC	7	1.1250	1.0322	.9497	.9704	63/64
	1 1/8-12	UNF	12	1.1250	1.0709	1.0228	1.0348	1 3/64
	1 1/4-7	UNC	7	1.2500	1.1572	1.0747	1.0954	1 7/64
	1 3/8-6	UNC	6	1.3750	1.2667	1.1705	1.1946	1 13/64
	1 1/2-6	UNC	6	1.5000	1.3917	1.2955	1.3196	1 11/32
	1 3/4-5	UNC	5	1.7500	1.6201	1.5046	1.5335	1 35/64
	2-4.5	UNC	4 1/2	2.0000	1.8557	1.7274	1.7594	1 25/32

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Thread Macro Worksheet

	INPUT:
	# INTERN0_EXTERN1 designates internal or external thread
	# THREADS is threads per inch
	# DIR_RH1_LH0 is direction of thread RH THREAD = 1, LH THREAD = 0
	# MAJOR_DIAMETER is just that
	# MINOR_DIAMETER is just that
	# NO_OF_PASSES is the number of passes to create
	# THREADMILL_D is diameter of the single point cutter
	# CENTER_X locates the helix X center
	# CENTER_Y locates the helix Y center
	# START_Z locates the start of thread for Z (leadin move added above this) Internal start at bottom of thread – External start at top of thread
	# FULL_THREADS how many full threads do you want

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