SELECTION GUIDE

YG THREADING TOOLS

HSS-PM & HSS-E
YG TAP
INOX

- For Stainless Steels

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

HOLE TYPE				Max. 2.5xD Blind Hole					
TOOL MATERIAL				HSS-PM					
CHAMFER LEAD				2P-3P					
FLUTE TYPE				Spiral Flute					
SPIRAL FLUTE ANGLE				R45					
SERIES	M								
	M/MF								
	UNC								
	UNC/UNF			G7 (p.B170)		G8 (p.B170)		G9 (p.B170)	H0 (p.B170)
	UNC/UNF/UNS								
	UNC/UN8								
	NPT								
	NPTF								
	NPS/NPSF								
SURFACE TREATMENT / COATING				TiN		TiN		Hardslick	Hardslick
MODEL									

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc					
P	1	Non-alloy steel	About 0.15% C	Annealed	125		○ 50-80	○ 50-80	○ 50-80	○ 50-80	1
	2		About 0.45% C	Annealed	190	13	◎ 50-80	◎ 50-80	◎ 50-80	◎ 50-80	2
	3		About 0.45% C	Quenched & Tempered	250	25	◎ 50-80	◎ 50-80	◎ 50-80	◎ 50-80	3
	4		About 0.75% C	Annealed	270	28	◎ 10-35	◎ 10-35	◎ 10-35	◎ 10-35	4
	5		About 0.75% C	Quenched & Tempered	300	32					5
	6	Low alloy steel		Annealed	180	10	◎ 10-35	◎ 10-35	◎ 10-35	◎ 10-35	6
	7			Quenched & Tempered	275	29					7
	8			Quenched & Tempered	300	32					8
	9			Quenched & Tempered	350	38					9
	10	High alloyed steel, and tool steel		Annealed	200	15					10
	11			Quenched & Tempered	325	35					11
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	◎ 20-50	◎ 20-50	◎ 20-50	◎ 20-50	12
	13		Martensitic	Quenched & Tempered	240	23	◎ 20-50	◎ 20-50	◎ 20-50	◎ 20-50	13
	14		Austenitic		180	10	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	14
K	15	Grey cast iron	Pearlitic / ferritic		180	10					15
	16		Pearlitic (Martensitic)		260	26					16
	17	Nodular cast iron	Ferritic		160	3					17
	18		Pearlitic		250	25					18
	19	Malleable cast iron	Ferritic		130						19
	20		Pearlitic		230	21					20
N	21	Aluminum-wrought alloy	Not Curable		60		○ 50-65	○ 50-65	○ 50-65	○ 50-65	21
	22		Curable	Hardened	100						22
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75						23
	24		≤ 12% Si, Curable	Hardened	90						24
	25		> 12% Si, Not Curable		130						25
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		○ 30-65	○ 30-65	○ 30-65	○ 30-65	26
	27		CuZn, CuSnZn (Brass)		90		○ 30-65	○ 30-65	○ 30-65	○ 30-65	27
	28		CuSn, lead-free copper and electrolytic copper		100						28
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic								29
	30		Rubber, Wood, etc.								30
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15					31
	32			Cured	280	30					32
	33		Ni or Co Based	Annealed	250	25					33
	34			Cured	350	38					34
	35			Cast	320	34					35
	36	Titanium Alloys	Pure Titanium		400 Rm						36
	37		Alpha + Beta Alloys	Hardened	1050 Rm						37
H	38	Hardened steel		Hardened	550	55					38
	39			Hardened	630	60					39
	40	Chilled Cast Iron		Cast	400	42					40
	41	Hardened Cast Iron		Hardened	550	55					41

				Max. 2.5xD Through Hole					
				HSS-E					
				2P-3P					
				Spiral Flute					
				R45					
									M
					BS (p.B175)	BT (p.B175)	E6 (p.B176)	E8 (p.B176)	E9 (p.B176)	M/MF
										UNC
B1 (p.B171)		B0 (p.B171)		B2 (p.B171)	D2 (p.B171)					UNC/UNF
										UNC/UNF/UNS
										UNC/UN8
										NPT
										NPTF
										NPS/NPSF
Bright		Steam Oxide		TiN	Hardslick	Steam Oxide	Hardslick	Steam Oxide	TiCN	Hardslick	
											
○ 25-50		○ 25-50		○ 50-80	○ 50-80	○ 25-50	○ 50-80	○ 25-50	○ 50-80	○ 50-80	1
◎ 25-50		◎ 25-50		◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	2
◎ 25-50		◎ 25-50		◎ 50-80	◎ 50-80	◎ 25-50	◎ 50-80	◎ 25-50	◎ 50-80	◎ 50-80	3
◎ 6-30		◎ 6-30		◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35	4
											5
◎ 6-30		◎ 6-30		◎ 10-35	◎ 10-35	◎ 6-30	◎ 10-35	◎ 6-30	◎ 10-35	◎ 10-35	6
											7
											8
											9
											10
											11
◎ 12-35		◎ 12-35		◎ 20-50	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 20-50	12
◎ 12-35		◎ 12-35		◎ 20-50	◎ 20-50	◎ 12-35	◎ 20-50	◎ 12-35	◎ 20-50	◎ 20-50	13
◎ 12-15		◎ 12-15		◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	◎ 12-15	14
											15
											16
											17
											18
											19
											20
○ 50-65				○ 50-65	○ 50-65		○ 50-65		○ 50-65	○ 50-65	21
											22
											23
											24
											25
○ 30-65		○ 30-65		○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	26
○ 30-65		○ 30-65		○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	○ 30-65	27
											28
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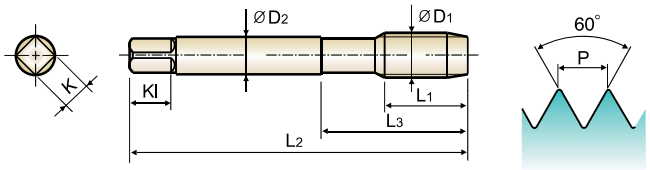
YG TAP INOX

G7 / G9 / G8 / H0 SERIES

Extended Length Spiral Flute Tap Modified Bottoming Style for Stainless Steels

Extended length for greater reach



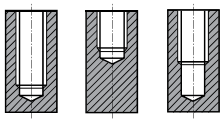


ANSI Long Shank

Material groups **VA** | HSS PM | UNC UNF | USCTI Long Shank | 2P~3P | TiN | Hardslick | R45 | p.B166

Thread Depth / Hole Type

2.5×D



Unit : Inch

Size D1		T.P.I	EDP No. TiN 4 OAL	EDP No. Hardslick 4 OAL	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#4	-	40UNC	G7162	G9162	H2	4.000	.236	.846	.141	.110	.190	3
#6	-	32UNC	G7243	G9243	H3	4.000	.276	1.024	.141	.110	.190	3
#8	-	32UNC	G7283	G9283	H3	4.000	.276	1.122	.168	.131	.250	3
#10	-	24UNC	G7323	G9323	H3	4.000	.354	1.319	.194	.152	.250	3
#10	-	32UNF	G7343	G9343	H3	4.000	.276	1.319	.194	.152	.250	3
1/4	-	20UNC	G7403	G9403	H3	4.000	.433	1.496	.255	.191	.310	3

Unit : Inch

Size D1		T.P.I	EDP No. TiN 6 OAL	EDP No. Hardslick 6 OAL	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
#6	-	32UNC	G8243	H0243	H3	6.000	.276	1.024	.141	.110	.190	3
#8	-	32UNC	G8283	H0283	H3	6.000	.276	1.122	.168	.131	.250	3
#10	-	24UNC	G8323	H0323	H3	6.000	.354	1.319	.194	.152	.250	3
#10	-	32UNF	G8343	H0343	H3	6.000	.276	1.319	.194	.152	.250	3
1/4	-	20UNC	G8403	H0403	H3	6.000	.433	1.496	.255	.191	.310	3
1/4	-	28UNF	G8423	H0423	H3	6.000	.433	1.496	.255	.191	.310	3
5/16	-	18UNC	G8443	H0443	H3	6.000	.472	1.693	.318	.238	.380	3
5/16	-	24UNF	G8463	H0463	H3	6.000	.394	1.693	.318	.238	.380	3
3/8	-	16UNC	G8483	H0483	H3	6.000	.551	1.870	.381	.286	.440	3
3/8	-	24UNF	G8503	H0503	H3	6.000	.394	1.870	.381	.286	.440	3
7/16	-	14UNC	G8523	H0523	H3	6.000	.591	2.165	.323	.242	.410	3
7/16	-	20UNF	G8543	H0543	H3	6.000	.472	2.165	.323	.242	.410	3
1/2	-	13UNC	G8563	H0563	H3	6.000	.630	2.480	.367	.275	.440	3
1/2	-	20UNF	G8583	H0583	H3	6.000	.472	2.480	.367	.275	.440	3
5/8	-	11UNC	G8643	H0643	H3	6.000	.748	2.717	.480	.360	.560	4

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	○	◎	◎	◎		◎						◎	◎	◎						

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○					○	○														

TECHNICAL DATA

TAP RECOMMENDATIONS FOR CLASSES OF THREAD - INCH

Internal Screw Thread Classes and Tap Recommendations

Size	Threads per Inch		Recommended Tap for Class of Thread				Pitch Diameter Limits for Class of Thread				
			Unified Class of Thread		American National Class of Thread		Min. All Class (Basic)	Unified Class of Thread		American National Class of Thread	
	UNC	UNF	Class 2	Class 3	Class 2B	Class 3B		Max. Class 2	Max. Class 3	Max. Class 2B	Max. Class 3B
#0	–	80	GH1	GH1	GH2	GH1	.0519	.0536	.0532	.0542	.0536
#1	64	–	GH1	GH1	GH2	GH1	.0629	.0648	.0643	.0655	.0648
#1	–	72	GH1	GH1	GH2	GH1	.0640	.0658	.0653	.0665	.0659
#2	56	–	GH1	GH1	GH2	GH1	.0744	.0764	.0759	.0772	.0765
#2	–	64	GH1	GH1	GH2	GH1	.0759	.0778	.0773	.0786	.0779
#3	48	–	GH1	GH1	GH2	GH1	.0855	.0877	.0871	.0885	.0877
#3	–	56	GH1	GH1	GH2	GH1	.0874	.0894	.8890	.0902	.0895
#4	40	–	GH2	GH1	GH2	GH2	.0958	.0982	.0975	.0991	.0982
#4	–	48	GH1	GH1	GH2	GH1	.0985	.1007	.1001	.1016	.1008
#5	40	–	GH2	GH1	GH2	GH2	.1088	.1112	.1105	.1121	.1113
#5	–	44	GH1	GH1	GH2	GH1	.1102	.1125	.1118	.1134	.1126
#6	32	–	GH2	GH1	GH3	GH2	.1177	.1204	.1196	.1214	.1204
#6	–	40	GH2	GH1	GH2	GH2	.1218	.1242	.1235	.1252	.1243
#8	32	–	GH2	GH1	GH3	GH2	.1437	.1464	.1456	.1475	.1465
#8	–	36	GH2	GH1	GH2	GH2	.1460	.1485	.1478	.1496	.1487
#10	24	–	GH3	GH1	GH3	GH3	.1629	.1662	.1653	.1672	.1661
#10	–	32	GH2	GH1	GH3	GH2	.1697	.1724	.1716	.1736	.1726
#12	24	–	GH3	GH1	GH3	GH3	.1889	.1922	.1913	.1933	.1922
#12	–	28	GH3	GH1	GH3	GH3	.1928	.1959	.1950	.1970	.1959
1/4	20	–	GH3	GH2	GH5	GH3	.2175	.2211	.2201	.2223	.2211
1/4	–	28	GH3	GH1	GH4	GH3	.2268	.2299	.2290	.2311	.2300
5/16	18	–	GH3	GH2	GH5	GH3	.2764	.2805	.2794	.2817	.2803
5/16	—	24	GH3	GH1	GH4	GH3	.2854	.2887	.2878	.2902	.2890
3/8	16	–	GH3	GH2	GH5	GH3	.3344	.3389	.3376	.3401	.3387
3/8	–	24	GH3	GH1	GH4	GH3	.3479	.3512	.3503	.3528	.3516
7/16	14	–	GH5	GH3	GH5	GH3	.3911	.3960	.3947	.3972	.3957
7/16	–	20	GH3	GH1	GH5	GH3	.4050	.4086	.4076	.4104	.4091
1/2	13	–	GH5	GH3	GH5	GH3	.4500	.4552	.4537	.4565	.4548
1/2	–	20	GH3	GH1	GH5	GH3	.4675	.4711	.4701	.4731	.4717
9/16	12	–	GH5	GH3	GH5	GH3	.5084	.5140	.5124	.5152	.5135
9/16	–	18	GH3	GH2	GH5	GH3	.5264	.5305	.5294	.5323	.5308
5/8	11	–	GH5	GH3	GH5	GH3	.5660	.5719	.5702	.5732	.5714
5/8	–	18	GH3	GH2	GH5	GH3	.5889	.5930	.5919	.5949	.5934
3/4	10	–	GH5	GH3	GH5	GH3	.6850	.6914	.6895	.6927	.6907
3/4	–	16	GH3	GH2	GH5	GH3	.7094	.7139	.7126	.7159	.7143
7/8	9	–	GH6	GH4	GH6	GH4	.8028	.8098	.8077	.8110	.8089
7/8	–	14	GH4	GH2	GH6	GH4	.8286	.8335	.8322	.8356	.8339
1	8	–	GH6	GH4	GH6	GH4	.9188	.9264	.9242	.9276	.9254
1	–	12	GH4	GH2	GH6	GH4	.9459	.9515	.9499	.9535	.9516

The above recommended taps normally produce the Class of Thread indicated in average materials when used with reasonable care. However, if the tap specified does not give a satisfactory gage fit in the work, a choice of some other limit tap will be necessary.

TAP DRILL SIZES - UNIFIED THREAD

Size	Threads Per Inch				Minor Diameter			Tap Drill Diameter (Cutting Tap)				
	UNC	UNF	UNEF	UN	Min. 2B&3B	Max. 2B	Max. 3B	80% Thread	75% Thread	70% Thread	65% Thread	60% Thread
#0	-	80	-	-	.0465	.0514	.0514	.0470	.0478	.0486	.0494	.0503
#1	64	-	-	-	.0561	.0623	.0623	.0568	.0578	.0588	.0598	.0608
	-	72	-	-	.0580	.0635	.0635	.0586	.0595	.0604	.0613	.0622
#2	56	-	-	-	.0667	.0737	.0737	.0674	.0686	.0698	.0709	.0721
	-	64	-	-	.0691	.0753	.0753	.0698	.0708	.0718	.0728	.0738
#3	48	-	-	-	.0764	.0845	.0845	.0774	.0787	.0801	.0814	.0828
	-	56	-	-	.0797	.0865	.0865	.0804	.0816	.0828	.0839	.0851
#4	40	-	-	-	.0849	.0939	.0939	.0860	.0876	.0893	.0909	.0925
	-	48	-	-	.0894	.0968	.0968	.0904	.0917	.0931	.0944	.0958
#5	40	-	-	-	.0979	.1062	.1062	.0990	.1006	.1023	.1039	.1055
	-	44	-	-	.1004	.1079	.1079	.1014	.1029	.1043	.1058	.1073
#6	32	-	-	-	.1040	.1140	.1140	.1055	.1076	.1096	.1116	.1136
	-	40	-	-	.1110	.1190	.1186	.1120	.1136	.1153	.1169	.1185
#8	32	-	-	-	.1300	.1390	.1389	.1315	.1336	.1356	.1376	.1396
	-	36	-	-	.1340	.1420	.1416	.1351	.1369	.1387	.1405	.1424
#10	24	-	-	-	.1450	.1560	.1555	.1467	.1494	.1521	.1548	.1575
	-	32	-	-	.1560	.1640	.1641	.1575	.1596	.1616	.1636	.1656
#12	24	-	-	-	.1710	.1810	.1807	.1727	.1754	.1781	.1808	.1835
	-	28	-	-	.1770	.1860	.1857	.1789	.1812	.1835	.1858	.1882
	-	-	32	-	.1820	.1900	.1895	.1835	.1856	.1876	.1896	.1916
1/4	20	-	-	-	.1960	.2070	.2067	.1980	.2013	.2045	.2078	.2110
	-	28	-	-	.2110	.2200	.2190	.2129	.2152	.2175	.2198	.2222
	-	-	32	-	.2160	.2240	.2229	.2175	.2196	.2216	.2236	.2256
5/16	18	-	-	-	.2520	.2650	.2630	.2548	.2584	.2620	.2656	.2692
	-	-	-	20	.2580	.2700	.2680	.2605	.2638	.2670	.2703	.2735
	-	24	-	-	.2670	.2770	.2754	.2692	.2719	.2746	.2773	.2800
	-	-	-	28	.2740	.2820	.2807	.2754	.2777	.2800	.2823	.2847
	-	-	32	-	.2790	.2860	.2847	.2800	.2821	.2841	.2861	.2881
3/8	16	-	-	-	.3070	.3210	.3182	.3101	.3141	.3182	.3222	.3263
	-	-	-	20	.3210	.3320	.3297	.3230	.3263	.3295	.3328	.3360
	-	24	-	-	.3300	.3400	.3372	.3317	.3344	.3371	.3398	.3425
	-	-	-	28	.3360	.3450	.3426	.3379	.3402	.3425	.3448	.3472
	-	-	32	-	.3410	.3490	.3469	.3425	.3446	.3466	.3486	.3506
7/16	14	-	-	-	.3600	.3760	.3717	.3633	.3679	.3726	.3772	.3818
	-	-	-	16	.3700	.3840	.3800	.3726	.3766	.3807	.3847	.3888
	-	20	-	-	.3830	.3950	.3916	.3855	.3888	.3920	.3953	.3985
	-	-	28	-	.3990	.4070	.4051	.4004	.4027	.4050	.4073	.4097
	-	-	-	32	.4040	.4110	.4094	.4050	.4071	.4091	.4111	.4131
1/2	13	-	-	-	.4170	.4340	.4284	.4201	.4251	.4301	.4351	.4400
	-	-	-	16	.4320	.4460	.4419	.4351	.4391	.4432	.4472	.4513
	-	20	-	-	.4460	.4570	.4537	.4480	.4513	.4545	.4578	.4610
	-	-	28	-	.4610	.4700	.4676	.4629	.4652	.4675	.4698	.4722
	-	-	-	32	.4660	.4740	.4719	.4675	.4696	.4716	.4736	.4756
9/16	12	-	-	-	.4720	.4900	.4843	.4759	.4813	.4867	.4921	.4976
	-	-	-	16	.4950	.5090	.5040	.4976	.5016	.5057	.5097	.5138
	-	18	-	-	.5020	.5150	.5106	.5048	.5084	.5120	.5156	.5192
	-	-	-	20	.5080	.5200	.5162	.5105	.5138	.5170	.5203	.5235
	-	-	24	-	.5170	.5270	.5244	.5192	.5219	.5246	.5273	.5300
	-	-	-	28	.5240	.5320	.5301	.5254	.5277	.5300	.5323	.5347
	-	-	-	32	.5290	.5360	.5344	.5300	.5321	.5341	.5361	.5381
5/8	11	-	-	-	.5270	.5460	.5391	.5305	.5364	.5423	.5482	.5541

TECHNICAL DATA

Size	Threads Per Inch				Minor Diameter			Tap Drill Diameter (Cutting Tap)				
	UNC	UNF	UNEF	UN	Min. 2B&3B	Max. 2B	Max. 3B	80% Thread	75% Thread	70% Thread	65% Thread	60% Thread
5/8	-	-	-	12	.5350	.5530	.5463	.5384	.5438	.5492	.5546	.5601
	-	-	-	16	.5570	.5710	.5662	.5601	.5641	.5682	.5722	.5763
	-	18	-	-	.5650	.5780	.5730	.5673	.5709	.5745	.5781	.5817
	-	-	-	20	.5710	.5820	.5787	.5730	.5763	.5795	.5828	.5860
	-	-	24	-	.5800	.5900	.5869	.5817	.5844	.5871	.5898	.5925
	-	-	-	28	.5860	.5950	.5926	.5879	.5902	.5925	.5948	.5972
	-	-	-	32	.5910	.5980	.5969	.5925	.5946	.5966	.5986	.6006
11/16	-	-	-	12	.5970	.6150	.6085	.6009	.6063	.6117	.6171	.6226
	-	-	-	16	.6200	.6340	.6284	.6226	.6266	.6307	.6347	.6388
	-	-	-	20	.6330	.6450	.6412	.6355	.6388	.6420	.6453	.6485
	-	-	24	-	.6420	.6520	.6494	.6442	.6469	.6496	.6523	.6550
	-	-	-	28	.6490	.6570	.6551	.6504	.6527	.6550	.6573	.6597
	-	-	-	32	.6540	.6610	.6594	.6550	.6571	.6591	.6611	.6631
3/4	10	-	-	-	.6420	.6630	.6545	.6461	.6526	.6591	.6656	.6721
	-	-	-	12	.6600	.6780	.6707	.6634	.6688	.6742	.6796	.6851
	-	16	-	-	.6820	.6960	.6908	.6851	.6891	.6932	.6972	.7013
	-	-	20	-	.6960	.7070	.7037	.6980	.7013	.7045	.7078	.7110
	-	-	-	28	.7110	.7200	.7176	.7129	.7152	.7175	.7198	.7222
	-	-	-	32	.7160	.7240	.7219	.7175	.7196	.7216	.7236	.7256
13/16	-	-	-	12	.7220	.7400	.7329	.7259	.7313	.7367	.7421	.7476
	-	-	-	16	.7450	.7590	.7533	.7476	.7516	.7557	.7597	.7638
	-	-	20	-	.7580	.7700	.7662	.7605	.7638	.7670	.7703	.7735
	-	-	-	28	.7740	.7820	.7801	.7754	.7777	.7800	.7823	.7847
	-	-	-	32	.7790	.7860	.7844	.7800	.7821	.7841	.7861	.7881
7/8	9	-	-	-	.7550	.7780	.7681	.7595	.7668	.7740	.7812	.7884
	-	-	-	12	.7850	.8030	.7948	.7884	.7938	.7992	.8046	.8101
	-	14	-	-	.7980	.8140	.8068	.8008	.8054	.8101	.8147	.8193
	-	-	-	16	.8070	.8210	.8158	.8101	.8141	.8182	.8222	.8263
	-	-	20	-	.8210	.8320	.8287	.8230	.8263	.8295	.8328	.8360
	-	-	-	28	.8360	.8450	.8426	.8379	.8402	.8425	.8448	.8472
	-	-	-	32	.8410	.8490	.8469	.8425	.8446	.8466	.8486	.8506
15/16	-	-	-	12	.8470	.8650	.8575	.8509	.8563	.8617	.8671	.8726
	-	-	-	16	.8700	.8840	.8783	.8726	.8766	.8807	.8847	.8888
	-	-	20	-	.8830	.8950	.8912	.8855	.8888	.8920	.8953	.8985
	-	-	-	28	.8990	.9070	.9051	.9004	.9027	.9050	.9073	.9097
	-	-	-	32	.9040	.9110	.9094	.9050	.9071	.9091	.9111	.9131
1	8	-	-	-	.8650	.8900	.8797	.8701	.8782	.8863	.8945	.9026
	-	12	-	-	.9100	.9280	.9198	.9134	.9188	.9242	.9296	.9351
	-	-	-	16	.9320	.9460	.9408	.9351	.9391	.9432	.9472	.9513
	-	-	20	-	.9460	.9570	.9537	.9480	.9513	.9545	.9578	.9610
	-	-	-	28	.9610	.9700	.9676	.9629	.9652	.9675	.9698	.9722
	-	-	-	32	.9660	.9740	.9719	.9675	.9696	.9716	.9736	.9756
1-1/16	-	-	-	8	.9270	.9520	.9422	.9326	.9407	.9488	.9570	.9651
	-	-	-	12	.9720	.9900	.9823	.9759	.9813	.9867	.9921	.9976
	-	-	-	16	.9950	1.0090	1.0033	.9976	1.0016	1.0057	1.0097	1.0138
	-	-	18	-	1.0020	1.0150	1.0105	1.0048	1.0084	1.0120	1.0156	1.0192
	-	-	-	20	1.0080	1.0200	1.0162	1.0105	1.0138	1.0170	1.0203	1.0235
	-	-	-	28	1.0240	1.0320	1.0301	1.0254	1.0277	1.0300	1.0323	1.0347
1-1/8	7	-	-	-	.9700	.9980	.9875	.9765	.9858	.9951	1.0044	1.0137
	-	-	-	8	.9900	1.0150	1.0047	.9951	1.0032	1.0113	1.0195	1.0276
	-	12	-	-	1.0350	1.0530	1.0448	1.0384	1.0438	1.0492	1.0546	1.0601
	-	-	-	16	1.0570	1.0710	1.0658	1.0601	1.0641	1.0682	1.0722	1.0763
	-	-	18	-	1.0650	1.0780	1.0730	1.0673	1.0709	1.0745	1.0781	1.0817
	-	-	-	20	1.0710	1.0820	1.0787	1.0730	1.0763	1.0795	1.0828	1.0860

TECHNICAL DATA

Size	Threads Per Inch				Minor Diameter			Tap Drill Diameter (Cutting Tap)				
	UNC	UNF	UNEF	UN	Min. 2B&3B	Max. 2B	Max. 3B	80% Thread	75% Thread	70% Thread	65% Thread	60% Thread
1-1/8	-	-	-	28	1.0860	1.0950	1.0926	1.0879	1.0902	1.0925	1.0948	1.0972
1-3/16	-	-	-	8	1.0520	1.0770	1.0672	1.0576	1.0657	1.0738	1.0820	1.0901
	-	-	-	12	1.0970	1.1150	1.1073	1.1009	1.1063	1.1117	1.1171	1.1226
	-	-	-	16	1.1200	1.1340	1.1283	1.1226	1.1266	1.1307	1.1347	1.1388
	-	-	18	-	1.1270	1.1400	1.1355	1.1298	1.1334	1.1370	1.1406	1.1442
	-	-	-	20	1.1330	1.1450	1.1412	1.1355	1.1388	1.1420	1.1453	1.1485
	-	-	-	28	1.1490	1.1570	1.1551	1.1504	1.1527	1.1550	1.1573	1.1597
1-1/4	7	-	-	-	1.0950	1.1230	1.1125	1.1015	1.1108	1.1201	1.1294	1.1387
	-	-	-	8	1.1150	1.1400	1.1297	1.1201	1.1282	1.1363	1.1445	1.1526
	-	12	-	-	1.1600	1.1780	1.1698	1.1634	1.1688	1.1742	1.1796	1.1851
	-	-	-	16	1.1820	1.1960	1.1908	1.1851	1.1891	1.1932	1.1972	1.2013
	-	-	18	-	1.1900	1.2030	1.1980	1.1923	1.1959	1.1995	1.2031	1.2067
	-	-	-	20	1.1960	1.2070	1.2037	1.1980	1.2013	1.2045	1.2078	1.2110
	-	-	-	28	1.2110	1.2200	1.2176	1.2129	1.2152	1.2175	1.2198	1.2222
1-5/16	-	-	-	8	1.1770	1.2020	1.2176	1.1826	1.1907	1.1988	1.2070	1.2151
	-	-	-	12	1.2220	1.2400	1.2323	1.2259	1.2313	1.2367	1.2421	1.2476
	-	-	-	16	1.2450	1.2590	1.2533	1.2476	1.2516	1.2557	1.2597	1.2638
	-	-	18	-	1.2520	1.2650	1.2605	1.2548	1.2584	1.2620	1.2656	1.2692
	-	-	-	20	1.2580	1.2700	1.2662	1.2605	1.2638	1.2670	1.2703	1.2735
	-	-	-	28	1.2740	1.2820	1.2801	1.2754	1.2777	1.2800	1.2823	1.2847
1-3/8	6	-	-	-	1.1950	1.2250	1.2146	1.2018	1.2126	1.2235	1.2343	1.2451
	-	-	-	8	1.2400	1.2650	1.2547	1.2451	1.2532	1.2613	1.2695	1.2776
	-	12	-	-	1.2850	1.3030	1.2948	1.2884	1.2938	1.2992	1.3046	1.3101
	-	-	-	16	1.3070	1.3210	1.3158	1.3101	1.3141	1.3182	1.3222	1.3263
	-	-	18	-	1.3150	1.3280	1.3230	1.3173	1.3209	1.3245	1.3281	1.3317
	-	-	-	20	1.3210	1.3320	1.3287	1.3230	1.3263	1.3295	1.3328	1.3360
	-	-	-	28	1.3360	1.3450	1.3426	1.3379	1.3402	1.3425	1.3448	1.3472
1-7/16	-	-	-	6	1.2570	1.2880	1.2770	1.2643	1.2751	1.2860	1.2968	1.3076
	-	-	-	8	1.3020	1.3270	1.3172	1.3076	1.3157	1.3238	1.3320	1.3401
	-	-	-	12	1.3470	1.3650	1.3573	1.3509	1.3563	1.3617	1.3671	1.3726
	-	-	-	16	1.3700	1.3840	1.3783	1.3726	1.3766	1.3807	1.3847	1.3888
	-	-	18	-	1.3770	1.3900	1.3855	1.3798	1.3834	1.3870	1.3906	1.3942
	-	-	-	20	1.3830	1.3950	1.3912	1.3855	1.3888	1.3920	1.3953	1.3985
	-	-	-	28	1.3990	1.4070	1.4051	1.4004	1.4027	1.4050	1.4073	1.4097
1-1/2	6	-	-	-	1.3200	1.3500	1.3396	1.3268	1.3376	1.3485	1.3593	1.3701
	-	-	-	8	1.3650	1.3900	1.3797	1.3701	1.3782	1.3863	1.3945	1.4026
	-	12	-	-	1.4100	1.4280	1.4198	1.4134	1.4188	1.4242	1.4296	1.4351
	-	-	-	16	1.4320	1.4460	1.4408	1.4351	1.4391	1.4432	1.4472	1.4513
	-	-	18	-	1.4400	1.4520	1.4480	1.4423	1.4459	1.4495	1.4531	1.4567
	-	-	-	20	1.4460	1.4570	1.4537	1.4480	1.4513	1.4545	1.4578	1.4610
	-	-	-	28	1.4610	1.4700	1.4676	1.4629	1.4652	1.4675	1.4698	1.4722
1-9/16	-	-	-	6	1.3820	1.4130	1.4021	1.3893	1.4001	1.4110	1.4218	1.4326
	-	-	-	8	1.4270	1.4520	1.4422	1.4326	1.4407	1.4488	1.4570	1.4651
	-	-	-	12	1.4720	1.4900	1.4823	1.4759	1.4813	1.4867	1.4921	1.4976
	-	-	-	16	1.4950	1.5090	1.5033	1.4976	1.5016	1.5057	1.5097	1.5138
	-	-	18	-	1.5020	1.5150	1.5105	1.5048	1.5084	1.5120	1.5156	1.5192
	-	-	-	20	1.5080	1.5200	1.5162	1.5105	1.5138	1.5170	1.5203	1.5235
1-5/8	-	-	-	6	1.4450	1.4750	1.4646	1.4518	1.4626	1.4735	1.4843	1.4951
	-	-	-	8	1.4900	1.5150	1.5047	1.4951	1.5032	1.5113	1.5195	1.5276
	-	-	-	12	1.5350	1.5530	1.5448	1.5384	1.5438	1.5492	1.5546	1.5601
	-	-	-	16	1.5570	1.5710	1.5658	1.5601	1.5641	1.5682	1.5722	1.5763
	-	-	18	-	1.5650	1.5780	1.5730	1.5673	1.5709	1.5745	1.5781	1.5817
	-	-	-	20	1.5710	1.5820	1.5787	1.5730	1.5763	1.5795	1.5828	1.5860
1-11/16	-	-	-	6	1.5070	1.5380	1.5271	1.5143	1.5251	1.5360	1.5468	1.5576

TECHNICAL DATA

Size	Threads Per Inch				Minor Diameter			Tap Drill Diameter (Cutting Tap)				
	UNC	UNF	UNEF	UN	Min. 2B&3B	Max. 2B	Max. 3B	80% Thread	75% Thread	70% Thread	65% Thread	60% Thread
1-11/16	-	-	-	8	1.5520	1.5770	1.5672	1.5576	1.5657	1.5738	1.5820	1.5901
	-	-	-	12	1.5970	1.6150	1.6073	1.6009	1.6063	1.6117	1.6171	1.6226
	-	-	-	16	1.6200	1.6340	1.6283	1.6226	1.6266	1.6307	1.6347	1.6388
	-	-	18	-	1.6270	1.6400	1.6355	1.6298	1.6334	1.6370	1.6406	1.6442
	-	-	-	20	1.6330	1.6450	1.6412	1.6355	1.6388	1.6420	1.6453	1.6485
1-3/4	5	-	-	-	1.5340	1.5680	1.5575	1.5422	1.5552	1.5681	1.5811	1.5941
	-	-	-	6	1.5700	1.6000	1.5896	1.5768	1.5876	1.5985	1.6093	1.6201
	-	-	-	8	1.6150	1.6400	1.6297	1.6201	1.6282	1.6363	1.6445	1.6526
	-	-	-	12	1.6600	1.6780	1.6698	1.6634	1.6688	1.6742	1.6796	1.6851
	-	-	-	16	1.6820	1.6960	1.6908	1.6851	1.6891	1.6932	1.6972	1.7013
	-	-	-	20	1.6960	1.7070	1.7037	1.6980	1.7013	1.7045	1.7078	1.7110
1-13/16	-	-	-	6	1.6320	1.6630	1.6521	1.6393	1.6501	1.6610	1.6718	1.6826
	-	-	-	8	1.6770	1.7020	1.6922	1.6826	1.6907	1.6988	1.7070	1.7151
	-	-	-	12	1.7220	1.7400	1.7323	1.7259	1.7313	1.7367	1.7421	1.7476
	-	-	-	16	1.7450	1.7590	1.7533	1.7476	1.7516	1.7557	1.7597	1.7638
	-	-	-	20	1.7580	1.7700	1.7662	1.7605	1.7638	1.7670	1.7703	1.7735
1-7/8	-	-	-	6	1.6950	1.7250	1.7146	1.7018	1.7126	1.7235	1.7343	1.7451
	-	-	-	8	1.7400	1.7650	1.7547	1.7451	1.7532	1.7613	1.7695	1.7776
	-	-	-	12	1.7850	1.8030	1.7948	1.7884	1.7938	1.7992	1.8046	1.8101
	-	-	-	16	1.8070	1.8210	1.8158	1.8101	1.8141	1.8182	1.8222	1.8263
	-	-	-	20	1.8210	1.8320	1.8287	1.8230	1.8263	1.8295	1.8328	1.8360
1-15/16	-	-	-	6	1.7570	1.7880	1.7771	1.7643	1.7751	1.7860	1.7968	1.8076
	-	-	-	8	1.8020	1.8270	1.8172	1.8076	1.8157	1.8238	1.8320	1.8401
	-	-	-	12	1.8470	1.8650	1.8573	1.8509	1.8563	1.8617	1.8671	1.8726
	-	-	-	16	1.8700	1.8840	1.8783	1.8726	1.8766	1.8807	1.8847	1.8888
	-	-	-	20	1.8830	1.8950	1.8912	1.8855	1.8888	1.8920	1.8953	1.8985
2	4 1/2	-	-	-	1.7590	1.7950	1.7861	1.7691	1.7835	1.7979	1.8124	1.8268
	-	-	-	6	1.8200	1.8500	1.8396	1.8268	1.8376	1.8485	1.8593	1.8701
	-	-	-	8	1.8650	1.8900	1.8797	1.8701	1.8782	1.8863	1.8945	1.9026
	-	-	-	12	1.9100	1.9280	1.9198	1.9134	1.9188	1.9242	1.9296	1.9351
	-	-	-	16	1.9320	1.9460	1.9408	1.9351	1.9391	1.9432	1.9472	1.9513
	-	-	-	20	1.9460	1.9570	1.9537	1.9480	1.9513	1.9545	1.9578	1.9610
2-1/8	-	-	-	6	1.9450	1.9750	1.9646	1.9518	1.9626	1.9735	1.9843	1.9951
	-	-	-	8	1.9900	2.0150	2.0047	1.9951	2.0032	2.0113	2.0195	2.0276
	-	-	-	12	2.0350	2.0530	2.0448	2.0384	2.0438	2.0492	2.0546	2.0601
	-	-	-	16	2.0570	2.0710	2.0658	2.0601	2.0641	2.0682	2.0722	2.0763
	-	-	-	20	2.0710	2.0820	2.0787	2.0730	2.0763	2.0795	2.0828	2.0860
2-1/4	4 1/2	-	-	-	2.0090	2.0450	2.0361	2.0191	2.0335	2.0479	2.0624	2.0768
	-	-	-	6	2.0700	2.1000	2.0896	2.0768	2.0876	2.0985	2.1093	2.1201
	-	-	-	8	2.1150	2.1400	2.1297	2.1201	2.1282	2.1363	2.1445	2.1526
	-	-	-	12	2.1600	2.1780	2.1698	2.1634	2.1688	2.1742	2.1796	2.1851
	-	-	-	16	2.1820	2.1960	2.1908	2.1851	2.1891	2.1932	2.1972	2.2013
	-	-	-	20	2.1960	2.2070	2.2037	2.1980	2.2013	2.2045	2.2078	2.2110
2-3/8	-	-	-	6	2.1950	2.2260	2.2146	2.2018	2.2126	2.2235	2.2343	2.2451
	-	-	-	8	2.2400	2.2650	2.2547	2.2451	2.2532	2.2613	2.2695	2.2776
	-	-	-	12	2.2850	2.3030	2.2948	2.2884	2.2938	2.2992	2.3046	2.3101
	-	-	-	16	2.3070	2.3210	2.3158	2.3101	2.3141	2.3182	2.3222	2.3263
	-	-	-	20	2.3210	2.3320	2.3287	2.3230	2.3263	2.3295	2.3328	2.3360
2-1/2	4	-	-	-	2.2290	2.2670	2.2594	2.2402	2.2564	2.2727	2.2889	2.3052
	-	-	-	6	2.3200	2.3500	2.3396	2.3268	2.3376	2.3485	2.3593	2.3701
	-	-	-	8	2.3650	2.3900	2.3797	2.3701	2.3782	2.3863	2.3945	2.4026
	-	-	-	12	2.4100	2.4280	2.4198	2.4134	2.4188	2.4242	2.4296	2.4351
	-	-	-	16	2.4320	2.4460	2.4408	2.4351	2.4391	2.4432	2.4472	2.4513
	-	-	-	20	2.4460	2.4570	2.4537	2.4480	2.4513	2.4545	2.4578	2.4610