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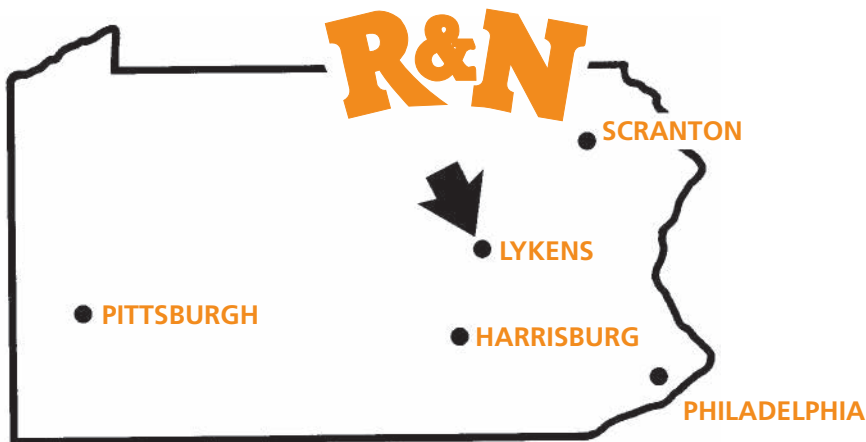
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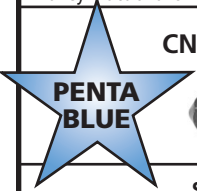
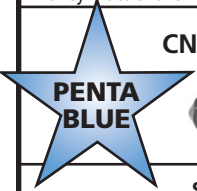
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HAND TAPS MACHINE SCREW SIZES

LIST 106A

Taper
 Plug
 Bottom



TAP SIZE	SERIES DESIG.	NO. OF FLUTES	H LIMIT	106A			
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	SET EDP NUMBER
0 - 80	NF	2	H-1	10011	10012	10013	10010
0 - 80	NF	2	H-2	10021	10022	10023	10020
1 - 64	NC	2	H-1	10111	10112	10113	10110
1 - 64	NC	2	H-2	10121	10122	10123	10120
1 - 72	NF	2	H-1	10211	10212	10213	10210
1 - 72	NF	2	H-2	10221	10222	10223	10220
2 - 56	NC	2	H-1	10311	10312	10313	10310
2 - 56	NC	2	H-2	10321	10322	10323	10320
2 - 56	NC	3	H-1	10411	10412	10413	10410
2 - 56	NC	3	H-2	10421	10422	10423	10420
2 - 64	NF	2	H-1	10511	10512	10513	10510
2 - 64	NF	2	H-2	10521	10522	10523	10520
2 - 64	NF	3	H-1	10611	10612	10613	10610
2 - 64	NF	3	H-2	10621	10622	10623	10620
3 - 48	NC	2	H-1	10711	10712	10713	10710
3 - 48	NC	2	H-2	10721	10722	10723	10720
3 - 48	NC	3	H-1	10811	10812	10813	10810
3 - 48	NC	3	H-2	10821	10822	10823	10820
3 - 56	NF	2	H-1	10911	10912	10913	10910
3 - 56	NF	2	H-2	10921	10922	10923	10920
3 - 56	NF	3	H-1	11011	11012	11013	11010
3 - 56	NF	3	H-2	11021	11022	11023	11020
4 - 40	NC	2	H-1	11311	11312	11313	11310
4 - 40	NC	2	H-2	11321	11322	11323	11320
4 - 40	NC	3	H-1	11411	11412	11413	11410
4 - 40	NC	3	H-2	11421	11422	11423	11420
4 - 48	NF	2	H-1	11511	11512	11513	11510
4 - 48	NF	2	H-2	11521	11522	11523	11520
4 - 48	NF	3	H-1	11611	11612	11613	11610
4 - 48	NF	3	H-2	11621	11622	11623	11620
4 - 36	NS	2	H-1	11111	11112	11113	11110
4 - 36	NS	2	H-2	11121	11122	11123	11120
4 - 36	NS	3	H-1	11211	11212	11213	11210
4 - 36	NS	3	H-2	11221	11222	11223	11220
5 - 40	NC	2	H-1	11711	11712	11713	11710
5 - 40	NC	2	H-2	11721	11722	11723	11720

See page 87 for Tap Recommendations for Classes 2B & 3B.
 See page 89 for Tap Dimensions.

HAND TAPS MACHINE SCREW SIZES (CONTINUED)

LIST 106A

Taper
Plug
Bottom



TAP SIZE	SERIES DESIG.	NO. OF FLUTES	H LIMIT	106A			
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	SET EDP NUMBER
5 - 40	NC	3	H-1	11811	11812	11813	11810
5 - 40	NC	3	H-2	11821	11822	11823	11820
5 - 44	NF	2	H-1	11911	11912	11913	11910
5 - 44	NF	2	H-2	11921	11922	11923	11920
5 - 44	NF	3	H-1	12011	12012	12013	12010
5 - 44	NF	3	H-2	12021	12022	12023	12020
6 - 32	NC	2	H-1	12111	12112	12113	12110
6 - 32	NC	2	H-2	12121	12122	12123	12120
6 - 32	NC	2	H-3	12131	12132	12133	12130
6 - 32	NC	3	H-1	12211	12212	12213	12210
6 - 32	NC	3	H-2	12221	12222	12223	12220
6 - 32	NC	3	H-3	12231	12232	12233	12230
6 - 40	NF	2	H-1	12311	12312	12313	12310
6 - 40	NF	2	H-2	12321	12322	12323	12320
6 - 40	NF	3	H-1	12411	12412	12413	12410
6 - 40	NF	3	H-2	12421	12422	12423	12420
8 - 32	NC	2	H-1	12511	12512	12513	12510
8 - 32	NC	2	H-2	12521	12522	12523	12520
8 - 32	NC	2	H-3	12531	12532	12533	12530
8 - 32	NC	3	H-1	12611	12612	12613	12610
8 - 32	NC	3	H-2	12621	12622	12623	12620
8 - 32	NC	3	H-3	12631	12632	12633	12630
8 - 32	NC	4	H-1	12711	12712	12713	12710
8 - 32	NC	4	H-2	12721	12722	12723	12720
8 - 32	NC	4	H-3	12731	12732	12733	12730
8 - 36	NF	2	H-1	12811	12812	12813	12810
8 - 36	NF	2	H-2	12821	12822	12823	12820
8 - 36	NF	3	H-1	12911	12912	12913	12910
8 - 36	NF	3	H-2	12921	12922	12923	12920
8 - 36	NF	4	H-1	13011	13012	13013	13010
8 - 36	NF	4	H-2	13021	13022	13023	13020
10 - 24	NC	2	H-1	13111	13112	13113	13110
10 - 24	NC	2	H-2	13121	13122	13123	13120
10 - 24	NC	2	H-3	13131	13132	13133	13130
10 - 24	NC	3	H-1	13211	13212	13213	13210
10 - 24	NC	3	H-2	13221	13222	13223	13220

HAND TAPS MACHINE SCREW SIZES (CONTINUED)

LIST 106A

Taper
 Plug
 Bottom



TAP SIZE	SERIES DESIG.	NO. OF FLUTES	H LIMIT	106A			
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	SET EDP NUMBER
10 - 24	NC	3	H-3	13231	13232	13233	13230
10 - 24	NC	4	H-1	13311	13312	13313	13310
10 - 24	NC	4	H-2	13321	13322	13323	13320
10 - 24	NC	4	H-3	13331	13332	13333	13330
10 - 32	NF	2	H-1	13411	13412	13413	13410
10 - 32	NF	2	H-2	13421	13422	13423	13420
10 - 32	NF	2	H-3	13431	13432	13433	13430
10 - 32	NF	3	H-1	13511	13512	13513	13510
10 - 32	NF	3	H-2	13521	13522	13523	13520
10 - 32	NF	3	H-3	13531	13532	13533	13530
10 - 32	NF	4	H-1	13611	13612	13613	13610
10 - 32	NF	4	H-2	13621	13622	13623	13620
10 - 32	NF	4	H-3	13631	13632	13633	13630
12 - 24	NC	4	H-1	13711	13712	13713	13710
12 - 24	NC	4	H-3	13731	13732	13733	13730
12 - 28	NF	4	H-1	13811	13812	13813	13810
12 - 28	NF	4	H-3	13831	13832	13833	13830
14 - 20	NS	4	H-3	13931	13932	13933	13930
14 - 24	NS	4	H-3	14031	14032	14033	14030

Penta Relief – Special thread geometry that allows for freer cutting. Available in Standard Taps in List Numbers 106A in size #10 with 2 & 3 Flutes and larger sizes, 103, 102C, 402VPR, 402VMR, 403V, 403VM, 407VPR and 407VMR.

HAND TAPS FRACTIONAL SIZES

LIST 103

Taper
Plug
Bottom



TAP SIZE	SERIES DESIG.	NO. OF FLUTES	H LIMIT	103			
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	SET EDP NUMBER
1/4 - 20	NC	2	H-1		24012	24013	
1/4 - 20	NC	2	H-2	24021	24022	24023	24020
1/4 - 20	NC	2	H-3	24031	24032	24033	24030
1/4 - 20	NC	2	H-5		24052	24053	
1/4 - 20	NC	3	H-1	24111	24112	24113	24110
1/4 - 20	NC	3	H-2	24121	24122	24123	24120
1/4 - 20	NC	3	H-3	24131	24132	24133	24130
1/4 - 20	NC	3	H-5	24151	24152	24153	24150
1/4 - 20	NC	4	L-1	24291	24292	24293	24290
1/4 - 20	NC	4	H-1	24211	24212	24213	24210
1/4 - 20	NC	4	H-2	24221	24222	24223	24220
1/4 - 20	NC	4	H-3	24231	24232	24233	24230
1/4 - 20	NC	4	H-5	24251	24252	24253	24250
1/4 - 28	NF	2	H-1	24311	24312	24313	24310
1/4 - 28	NF	2	H-2	24321	24322	24323	24320
1/4 - 28	NF	2	H-3	24331	24332	24333	24330
1/4 - 28	NF	2	H-4	24341	24342	24343	24340
1/4 - 28	NF	3	H-1		24412		
1/4 - 28	NF	3	H-2	24421	24422	24423	24420
1/4 - 28	NF	3	H-3	24431	24432	24433	24430
1/4 - 28	NF	3	H-4	24441	24442	24443	24440
1/4 - 28	NF	4	H-1	24511	24512	24513	24510
1/4 - 28	NF	4	H-2	24521	24522	24523	24520
1/4 - 28	NF	4	H-3	24531	24532	24533	24530
1/4 - 28	NF	4	H-4	24541	24542	24543	24540
5/16 - 18	NC	2	H-1		24612	24613	
5/16 - 18	NC	2	H-2	24621	24622	24623	24620
5/16 - 18	NC	2	H-3	24631	24632	24633	24630
5/16 - 18	NC	2	H-5		24652	24653	
5/16 - 18	NC	3	H-1		24712		
5/16 - 18	NC	3	H-2		24722	24723	
5/16 - 18	NC	3	H-3	24731	24732	24733	24730
5/16 - 18	NC	3	H-5		24752	24753	
5/16 - 18	NC	4	L-1	24891	24892	24893	24890
5/16 - 18	NC	4	H-1	24811	24812	24813	24810
5/16 - 18	NC	4	H-2	24821	24822	24823	24820

See page 87 for Tap Recommendations for Classes 2B & 3B.
See page 89 for Tap Dimensions.

HAND TAPS FRACTIONAL SIZES (CONTINUED)

LIST 103

Taper
 Plug
 Bottom



TAP SIZE	SERIES DESIG.	NO. OF FLUTES	H LIMIT	103			
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	SET EDP NUMBER
5/16 - 18	NC	4	H-3	24831	24832	24833	24830
5/16 - 18	NC	4	H-5	24851	24852	24853	24850
5/16 - 24	NF	2	H-1		24912	24913	
5/16 - 24	NF	2	H-2		24922	24923	
5/16 - 24	NF	2	H-3	24931	24932	24933	24930
5/16 - 24	NF	2	H-4		24942	24943	
5/16 - 24	NF	3	H-1		25012	25013	
5/16 - 24	NF	3	H-2		25022	25023	
5/16 - 24	NF	3	H-3	25031	25032	25033	25030
5/16 - 24	NF	3	H-4	25041	25042	25043	25040
5/16 - 24	NF	4	H-1	25111	25112	25113	25110
5/16 - 24	NF	4	H-2	25121	25122	25123	25120
5/16 - 24	NF	4	H-3	25131	25132	25133	25130
5/16 - 24	NF	4	H-4	25141	25142	25143	25140
3/8 - 16	NC	3	H-1	25211	25212	25213	25210
3/8 - 16	NC	3	H-2	25221	25222	25223	25220
3/8 - 16	NC	3	H-3	25231	25232	25233	25230
3/8 - 16	NC	3	H-5	25251	25252	25253	25250
3/8 - 16	NC	4	L-1	25391	25392	25393	25390
3/8 - 16	NC	4	H-1	25311	25312	25313	25310
3/8 - 16	NC	4	H-2	25321	25322	25323	25320
3/8 - 16	NC	4	H-3	25331	25332	25333	25330
3/8 - 16	NC	4	H-5	25351	25352	25353	25350
3/8 - 24	NF	3	H-1		25412		
3/8 - 24	NF	3	H-2	25421	25422	25423	25420
3/8 - 24	NF	3	H-3	25431	25432	25433	25430
3/8 - 24	NF	3	H-4		25442	25443	
3/8 - 24	NF	4	H-1	25511	25512	25513	25510
3/8 - 24	NF	4	H-2	25521	25522	25523	25520
3/8 - 24	NF	4	H-3	25531	25532	25533	25530
3/8 - 24	NF	4	H-4	25541	25542	25543	25540
7/16 - 14	NC	3	H-1		25612	25613	
7/16 - 14	NC	3	H-2		25622	25623	
7/16 - 14	NC	3	H-3	25631	25632	25633	25630
7/16 - 14	NC	3	H-5	25651	25652	25653	25650
7/16 - 14	NC	4	L-1	25791	25792	25793	25790

Penta Relief – Special thread geometry that allows for freer cutting. Available in Standard Taps in List Numbers 106A in size #10 with 2 & 3 Flutes and larger sizes, 103, 102C, 402VPR, 402VMPPR, 403V, 403VM, 407VPR and 407VMPPR.

HAND TAPS FRACTIONAL SIZES (CONTINUED)

LIST 103

Taper
Plug
Bottom



TAP SIZE	SERIES DESIG.	NO. OF FLUTES	H LIMIT	103			
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	SET EDP NUMBER
7/16 - 14	NC	4	H-1	25711	25712	25713	25710
7/16 - 14	NC	4	H-2	25721	25722	25723	25720
7/16 - 14	NC	4	H-3	25731	25732	25733	25730
7/16 - 14	NC	4	H-5	25751	25752	25753	25750
7/16 - 20	NF	3	H-1		25812		
7/16 - 20	NF	3	H-2		25822		
7/16 - 20	NF	3	H-3	25831	25832	25833	25830
7/16 - 20	NF	3	H-5		25852	25853	
7/16 - 20	NF	4	H-1	25911	25912	25913	25910
7/16 - 20	NF	4	H-2	25921	25922	25923	25920
7/16 - 20	NF	4	H-3	25931	25932	25933	25930
7/16 - 20	NF	4	H-5	25951	25952	25953	25950
1/2 - 13	NC	3	H-1	26011	26012	26013	26010
1/2 - 13	NC	3	H-2	26021	26022	26023	26020
1/2 - 13	NC	3	H-3	26031	26032	26033	26030
1/2 - 13	NC	3	H-5	26051	26052	26053	26050
1/2 - 13	NC	4	L-1	26191	26192	26193	26190
1/2 - 13	NC	4	H-1	26111	26112	26113	26110
1/2 - 13	NC	4	H-2	26121	26122	26123	26120
1/2 - 13	NC	4	H-3	26131	26132	26133	26130
1/2 - 13	NC	4	H-5	26151	26152	26153	26150
1/2 - 20	NF	3	H-1		26212		
1/2 - 20	NF	3	H-2	26221	26222	26223	26220
1/2 - 20	NF	3	H-3	26231	26232	26233	26230
1/2 - 20	NF	3	H-5	26251	26252	26253	26250
1/2 - 20	NF	4	H-1	26311	26312	26313	26310
1/2 - 20	NF	4	H-2	26321	26322	26323	26320
1/2 - 20	NF	4	H-3	26331	26332	26333	26330
1/2 - 20	NF	4	H-5	26351	26352	26353	26350

See page 87 for Tap Recommendations for Classes 2B & 3B.
See page 89 for Tap Dimensions.

HAND TAPS FRACTIONAL SIZES (CONTINUED)

LIST 103

Taper
 Plug
 Bottom



TAP SIZE	SERIES DESIG.	NO. OF FLUTES	H LIMIT	103			
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	SET EDP NUMBER
9/16 - 12	NC	4	H-1	26411	26412	26413	26410
9/16 - 12	NC	4	H-2	26421	26422	26423	26420
9/16 - 12	NC	4	H-3	26431	26432	26433	26430
9/16 - 12	NC	4	H-5	26451	26452	26453	26450
9/16 - 18	NF	4	H-1	26511	26512	26513	26510
9/16 - 18	NF	4	H-2	26521	26522	26523	26520
9/16 - 18	NF	4	H-3	26531	26532	26533	26530
9/16 - 18	NF	4	H-5	26551	26552	26553	26550
5/8 - 11	NC	4	H-1	26611	26612	26613	26610
5/8 - 11	NC	4	H-2	26621	26622	26623	26620
5/8 - 11	NC	4	H-3	26631	26632	26633	26630
5/8 - 11	NC	4	H-5	26651	26652	26653	26650
5/8 - 18	NF	4	H-1	26711	26712	26713	26710
5/8 - 18	NF	4	H-2	26721	26722	26723	26720
5/8 - 18	NF	4	H-3	26731	26732	26733	26730
5/8 - 18	NF	4	H-5	26751	26752	26753	26750
11/16 - 11	NS	4	H-3	26831	26832	26833	26830
11/16 - 16	NS	4	H-3	26931	26932	26933	26930
3/4 - 10	NC	4	H-1	27011	27012	27013	27010
3/4 - 10	NC	4	H-2	27021	27022	27023	27020
3/4 - 10	NC	4	H-3	27031	27032	27033	27030
3/4 - 10	NC	4	H-5	27051	27052	27053	27050
3/4 - 16	NF	4	H-1	27111	27112	27113	27110
3/4 - 16	NF	4	H-2	27121	27122	27123	27120
3/4 - 16	NF	4	H-3	27131	27132	27133	27130
3/4 - 16	NF	4	H-5	27151	27152	27153	27150
7/8 - 9	NC	4	H-1	27211	27212	27213	27210
7/8 - 9	NC	4	H-2	27221	27222	27223	27220
7/8 - 9	NC	4	H-4	27241	27242	27243	27240
7/8 - 9	NC	4	H-6	27261	27262	27263	27260
7/8 - 14	NF	4	H-1	27311	27312	27313	27310
7/8 - 14	NF	4	H-2	27321	27322	27323	27320
7/8 - 14	NF	4	H-4	27341	27342	27343	27340
7/8 - 14	NF	4	H-6	27361	27362	27363	27360
1 - 8	NC	4	H-1	27411	27412	27413	27410
1 - 8	NC	4	H-2	27421	27422	27423	27420
1 - 8	NC	4	H-4	27441	27442	27443	27440
1 - 8	NC	4	H-6	27461	27462	27463	27460
1 - 12	NF	4	H-1	27511	27512	27513	27510
1 - 12	NF	4	H-2	27521	27522	27523	27520

HAND TAPS FRACTIONAL SIZES (CONTINUED)

LIST 103

Taper
Plug
Bottom



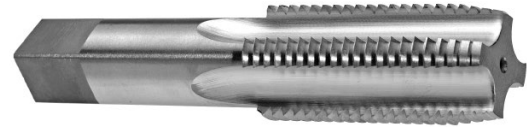
TAP SIZE	SERIES DESIG.	NO. OF FLUTES	H LIMIT	103			
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	SET EDP NUMBER
1 - 12	NF	4	H-4	27541	27542	27543	27540
1 - 12	NF	4	H-6	27561	27562	27563	27560
1 - 14	NS	4	H-1	27611	27612	27613	27610
1 - 14	NS	4	H-2	27621	27622	27623	27620
1 - 14	NS	4	H-4	27641	27642	27643	27640
1 - 14	NS	4	H-6	27661	27662	27663	27660
1 1/8 - 7	NC	4	H-4	27741	27742	27743	27740
1 1/8 - 7	NC	4	H-8	27781	27782	27783	27780
1 1/8 - 12	NF	4	H-4	27841	27842	27843	27840
1 1/8 - 12	NF	4	H-6	27861	27862	27863	27860
1 1/4 - 7	NC	4	H-4	27941	27942	27943	27940
1 1/4 - 7	NC	4	H-8	27981	27982	27983	27980
1 1/4 - 12	NF	6	H-4	28041	28042	28043	28040
1 1/4 - 12	NF	6	H-6	28061	28062	28063	28060
1 3/8 - 6	NC	4	H-4	28141	28142	28143	28140
1 3/8 - 6	NC	4	H-8	28181	28182	28183	28180
1 3/8 - 12	NF	6	H-4	28241	28242	28243	28240
1 3/8 - 12	NF	6	H-6	28261	28262	28263	28260
1 1/2 - 6	NC	4	H-4	28341	28342	28343	28340
1 1/2 - 6	NC	4	H-8	28381	28382	28383	28380
1 1/2 - 12	NF	6	H-4	28441	28442	28443	28440
1 1/2 - 12	NF	6	H-6	28461	28462	28463	28460

Penta Relief – Special thread geometry that allows for freer cutting. Available in Standard Taps in List Numbers 106A in size #10 with 2 & 3 Flutes and larger sizes, 103, 102C, 402VPR, 402VMMPR, 403V, 403VM, 407VPR and 407VMMPR.

HAND TAPS LARGE DIAMETER

LIST 103

Taper
 Plug
 Bottom



NOTE: 302 Long Series, 303 Short Series

TAP SIZE	SERIES DESIGN.	NO. OF FLUTES	BLANK STYLE	H LIMIT	103		
					TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER
1 1/16 - 12	NS	4	302	H-4	90011	90012	90013
1 1/8 - 8	8N	4	302	H-4	90041	90042	90043
1 3/16 - 12	NS	6	302	H-4	90081	90082	90083
1 1/4 - 8	8N	4	302	H-4	90141	90142	90143
1 5/16 - 12	NS	6	302	H-4	90241	90242	90243
1 3/8 - 8	8N	4	302	H-4	90341	90342	90343
1 1/2 - 8	8N	4	302	H-4	90441	90442	90443
1 5/8 - 5 1/2	NS	6	302	G331 H-7	90571	90572	90573
1 5/8 - 8	8N	6	302	G331 H-6	90521	90522	90523
1 5/8 - 12	12N	6	303	G331 H-6	90561	90562	90563
1 3/4 - 5	NC	6	302	G331 H-7	90621	90622	90623
1 3/4 - 8	8N	6	302	G331 H-6	90761	90762	90763
1 3/4 - 12	12N	6	303	G331 H-6	90961	90962	90963
1 7/8 - 5	NS	6	302	G331 H-7	91071	91072	91073
1 7/8 - 8	8N	6	302	G331 H-6	91161	91162	91163
1 7/8 - 12	12N	6	303	G331 H-6	91261	91262	91263
2 - 4 1/2	NC	6	302	G331 H-7	90821	90822	90823
2 - 8	8N	6	302	G331 H-6	91361	91362	91363
2 - 12	12N	6	303	G331 H-6	91461	91462	91463

NOTE: Larger sizes and optional pitches, consult factory for price and delivery.

HAND TAPS MACHINE SCREW AND FRACTIONAL SIZES SEMI BOTTOMING

LIST 125

2 - 2 1/2 Thread Chamfer



NOTE: Please specify if points on thread end are to be removed.

TAP SIZE	SERIES DESIGN.	NO. OF FLUTES	EDP NUMBER	
			H-3	H-4
6 - 32	NC	3	12235	
8 - 32	NC	4	12735	
10 - 24	NC	4	13335	
10 - 32	NF	4	13635	
12 - 24	NC	4	13735	
12 - 28	NF	4	13835	
1/4 - 20	NC	4	24235	
1/4 - 28	NF	4	24535	
5/16 - 18	NC	4	24835	
5/16 - 24	NF	4	25135	
3/8 - 16	NC	4	25335	
3/8 - 24	NF	4	25535	
7/16 - 14	NC	4	25735	
7/16 - 20	NF	4	25935	
1/2 - 13	NC	4	26135	
1/2 - 20	NF	4	26335	
9/16 - 12	NC	4	26435	
9/16 - 18	NF	4	26535	
5/8 - 11	NC	4	26635	
5/8 - 18	NF	4	26735	
3/4 - 10	NC	4	27035	
3/4 - 16	NF	4	27135	
7/8 - 9	NC	4		27245
7/8 - 14	NF	4		27345
1 - 8	NC	4		27445
1 - 12	NF	4		27545
1 - 14	NS	4		27645

See page 87 for Tap Recommendations for Classes 2B & 3B.
See page 89 for Tap Dimensions.

SPIRAL POINT TAPS MACHINE SCREW SIZES

LIST 106C

**Spiral Point Plug
 Spiral Point Bottom**



TAP SIZE	SERIES DESIGN.	NO. OF FLUTES	STYLE	EDP NUMBER		
				H-1	H-2	H-3
0 - 80	NF	2	SPPT PLUG	14112	14122	
0 - 80	NF	2	SPPT BOTT	14113	14123	
1 - 64	NC	2	SPPT PLUG	14212	14222	
1 - 64	NC	2	SPPT BOTT	14213	14223	
1 - 72	NF	2	SPPT PLUG	14312	14322	
1 - 72	NF	2	SPPT BOTT	14313	14323	
2 - 56	NC	2	SPPT PLUG	14412	14422	
2 - 56	NC	2	SPPT BOTT	14413	14423	
2 - 64	NF	2	SPPT PLUG	14512	14522	
2 - 64	NF	2	SPPT BOTT	14513	14523	
3 - 48	NC	2	SPPT PLUG	14612	14622	
3 - 48	NC	2	SPPT BOTT	14613	14623	
3 - 56	NF	2	SPPT PLUG	14712	14722	
3 - 56	NF	2	SPPT BOTT	14713	14723	
4 - 40	NC	2	SPPT PLUG	14912	14922	
4 - 40	NC	2	SPPT BOTT	14913	14923	
4 - 48	NF	2	SPPT PLUG	15012	15022	
4 - 48	NF	2	SPPT BOTT	15013	15023	
4 - 36	NS	2	SPPT PLUG	14812	14822	
4 - 36	NS	2	SPPT BOTT	14813	14823	
5 - 40	NC	2	SPPT PLUG	15112	15122	
5 - 40	NC	2	SPPT BOTT	15113	15123	
5 - 44	NF	2	SPPT PLUG	15212	15222	
5 - 44	NF	2	SPPT BOTT	15213	15223	
6 - 32	NC	2	SPPT PLUG	15312	15322	15332
6 - 32	NC	2	SPPT BOTT	15313	15323	15333
6 - 40	NF	2	SPPT PLUG	15412	15422	
6 - 40	NF	2	SPPT BOTT	15413	15423	
8 - 32	NC	2	SPPT PLUG	15512	15522	15532
8 - 32	NC	2	SPPT BOTT	15513	15523	15533
8 - 36	NF	2	SPPT PLUG	15612	15622	15632
8 - 36	NF	2	SPPT BOTT	15613	15623	15633
10 - 24	NC	2	SPPT PLUG	15712	15722	15732
10 - 24	NC	2	SPPT BOTT	15713	15723	15733
10 - 32	NF	2	SPPT PLUG	15812	15822	15832
10 - 32	NF	2	SPPT BOTT	15813	15823	15833
12 - 24	NC	2	SPPT PLUG	15912		15932
12 - 24	NC	2	SPPT BOTT	15913		15933
12 - 28	NF	2	SPPT PLUG	16012		16032
12 - 28	NF	2	SPPT BOTT	16013		16033
14 - 20	NS	2	SPPT PLUG			16132
14 - 24	NS	2	SPPT PLUG			16232

SPIRAL POINT TAPS FRACTIONAL SIZES

LIST 102C

Spiral Point Plug
Spiral Point Bottom



TAP SIZE	SERIES DESIG.	NO. OF FLUTES	STYLE	EDP NUMBER					
				L-1	H-1	H-2	H-3	H-4	H-5
1/4 - 20	NC	2	SPPT PLUG	32592	32512	32522	32532		32552
1/4 - 20	NC	2	SPPT BOTT				32533		
1/4 - 20	NC	3	SPPT PLUG		32612	32622	32632		32652
1/4 - 20	NC	3	SPPT BOTT				32633		
1/4 - 28	NF	2	SPPT PLUG		32712	32722	32732	32742	
1/4 - 28	NF	2	SPPT BOTT				32733		
1/4 - 28	NF	3	SPPT PLUG		32812	32822	32832	32842	
1/4 - 28	NF	3	SPPT BOTT				32833		
5/16 - 18	NC	2	SPPT PLUG	32992	32912	32922	32932		32952
5/16 - 18	NC	2	SPPT BOTT				32933		
5/16 - 18	NC	3	SPPT PLUG		33012	33022	33032		33052
5/16 - 18	NC	3	SPPT BOTT				33033		
5/16 - 24	NF	2	SPPT PLUG		33112	33122	33132	33142	
5/16 - 24	NF	2	SPPT BOTT				33133		
5/16 - 24	NF	3	SPPT PLUG		33212	33222	33232	33242	
5/16 - 24	NF	3	SPPT BOTT				33233		
3/8 - 16	NC	3	SPPT PLUG	33392	33312	33322	33332		33352
3/8 - 16	NC	3	SPPT BOTT				33333		
3/8 - 24	NF	3	SPPT PLUG		33412	33422	33432	33442	
3/8 - 24	NF	3	SPPT BOTT				33433		
7/16 - 14	NC	3	SPPT PLUG	33592	33512	33522	33532		33552
7/16 - 14	NC	3	SPPT BOTT				33533		
7/16 - 20	NF	3	SPPT PLUG		33612	33622	33632		33652
7/16 - 20	NF	3	SPPT BOTT				33633		
1/2 - 13	NC	3	SPPT PLUG	33792	33712	33722	33732		33752
1/2 - 13	NC	3	SPPT BOTT				33733		
1/2 - 20	NF	3	SPPT PLUG		33812	33822	33832		33852
1/2 - 20	NF	3	SPPT BOTT				33833		
9/16 - 12	NC	3	SPPT PLUG		33912	33922	33932		33952
9/16 - 12	NC	3	SPPT BOTT				33933		
9/16 - 18	NF	3	SPPT PLUG		34012	34022	34032		34052
9/16 - 18	NF	3	SPPT BOTT				34033		
5/8 - 11	NC	3	SPPT PLUG		34112	34122	34132		34152
5/8 - 11	NC	3	SPPT BOTT				34133		
5/8 - 18	NF	3	SPPT PLUG		34212	34222	34232		34252
5/8 - 18	NF	3	SPPT BOTT				34233		
11/16 - 11	NS	3	SPPT PLUG				34332		
11/16 - 11	NS	3	SPPT BOTT				34333		
11/16 - 16	NS	3	SPPT PLUG				34432		
11/16 - 16	NS	3	SPPT BOTT				34433		
3/4 - 10	NC	3	SPPT PLUG		34512	34522	34532		34552
3/4 - 10	NC	3	SPPT BOTT				34533		
3/4 - 16	NF	3	SPPT PLUG		34612	34622	34632		34652
3/4 - 16	NF	3	SPPT BOTT				34633		
7/8 - 9	NC	3	SPPT PLUG					34852	
7/8 - 9	NC	4	SPPT PLUG					34842	
7/8 - 14	NF	3	SPPT PLUG					34952	
7/8 - 14	NF	4	SPPT PLUG					34942	
1 - 8	NC	3	SPPT PLUG					35052	
1 - 8	NC	4	SPPT PLUG					35042	
1 - 12	NF	4	SPPT PLUG					35142	
1 - 14	NS	4	SPPT PLUG					35242	

TIN COATED SPIRAL POINT PLUG TAPS

**LIST 106C TIN COATED
 LIST 102C TIN COATED**

**Machine Screw Sizes
 Fractional Sizes**



TAP SIZE	SERIES DESIGNATION	NO. OF FLUTES	EDP NUMBER	
			H-2	H-3
MACHINE SCREW SIZES				
0 - 80	NF	2	99674	
2 - 56	NC	2	99675	
3 - 48	NC	2	99676	
3 - 56	NF	2	99677	
4 - 40	NC	2	99513	
4 - 48	NF	2	99514	
5 - 40	NC	2	99515	
5 - 44	NF	2	99516	
6 - 32	NC	2	99517	99518
6 - 40	NF	2	99519	
8 - 32	NC	2	99520	99521
8 - 36	NF	2	99522	
10 - 24	NC	2	99523	99524
10 - 32	NF	2	99525	99526
12 - 24	NC	2		99527
12 - 28	NF	2		99528
FRACTIONAL SIZES				
1/4 - 20	NC	2	99529	99530
1/4 - 20	NC	3	99531	99532
1/4 - 28	NF	2	99533	99534
1/4 - 28	NF	3	99535	99536
5/16 - 18	NC	2	99537	99538
5/16 - 18	NC	3	99539	99540
5/16 - 24	NF	2	99541	99542
5/16 - 24	NF	3		99543
3/8 - 16	NC	3	99544	99545
3/8 - 24	NF	3	99546	99547
7/16 - 14	NC	3		99548
7/16 - 20	NF	3		99549
1/2 - 13	NC	3		99550
1/2 - 20	NF	3		99551
9/16 - 12	NC	3		99552
9/16 - 18	NF	3		99553
5/8 - 11	NC	3		99554
5/8 - 18	NF	3		99555
3/4 - 10	NC	3		99556
3/4 - 16	NF	3		99557

POA - Contact the plant for pricing on TiN Coated Taps.

SLOW SPIRAL FLUTED 30° MACHINE SCREW TAPS

LIST 101S

Plug
Bottom



TAP SIZE	SERIES DESIGN.	NO. OF FLUTES	STYLE	EDP NUMBER		
				H-1	H-2	H-3
3 - 48	NC	2	PLUG	18512	18522	
3 - 48	NC	2	BOTT	18513	18523	
3 - 56	NF	2	PLUG	18612	18622	
3 - 56	NF	2	BOTT	18613	18623	
4 - 40	NC	2	PLUG	18712	18722	
4 - 40	NC	2	BOTT	18713	18723	
4 - 48	NF	2	PLUG	18812	18822	
4 - 48	NF	2	BOTT	18813	18823	
5 - 40	NC	2	PLUG	18912	18922	
5 - 40	NC	2	BOTT	18913	18923	
5 - 44	NF	2	PLUG	19012	19022	
5 - 44	NF	2	BOTT	19013	19023	
6 - 32	NC	2	PLUG	19112		19132
6 - 32	NC	2	BOTT	19113		19133
6 - 40	NF	2	PLUG	19212	19222	
6 - 40	NF	2	BOTT	19213	19223	
8 - 32	NC	2	PLUG	19312		19332
8 - 32	NC	2	BOTT	19313		19333
8 - 36	NF	2	PLUG	19412	19422	
8 - 36	NF	2	BOTT	19413	19423	
10 - 24	NC	2	PLUG	19512		19532
10 - 24	NC	2	BOTT	19513		19533
10 - 32	NF	2	PLUG	19612		19632
10 - 32	NF	2	BOTT	19613		19633
12 - 24	NC	2	PLUG	19712		19732
12 - 24	NC	2	BOTT	19713		19733
12 - 28	NF	2	PLUG	19812		19832
12 - 28	NF	2	BOTT	19813		19833

Penta Relief – Special thread geometry that allows for freer cutting. Available in Standard Taps in List Numbers 106A in size #10 with 2 & 3 Flutes and larger sizes, 103, 102C, 402VPR, 402VMPP, 403V, 403VM, 407VP and 407VMPP.

SLOW SPIRAL FLUTED 30° FRACTIONAL TAPS

LIST 106S

Plug
Bottom



TAP SIZE	SERIES DESIGN.	NO. OF FLUTES	STYLE	EDP NUMBER		
				H-1	H-3	H-5
1/4 - 20	NC	2	PLUG	29012	29032	29052
1/4 - 20	NC	2	BOTT	29013	29033	29053
1/4 - 20	NC	3	PLUG	29112	29132	29152
1/4 - 20	NC	3	BOTT	29113	29133	29153
1/4 - 28	NF	2	PLUG	29212	29232	
1/4 - 28	NF	2	BOTT	29213	29233	
1/4 - 28	NF	3	PLUG	29312	29332	
1/4 - 28	NF	3	BOTT	29313	29333	
5/16 - 18	NC	2	PLUG	29412	29432	29452
5/16 - 18	NC	2	BOTT	29413	29433	29453
5/16 - 18	NC	3	PLUG	29512	29532	29552
5/16 - 18	NC	3	BOTT	29513	29533	29553
5/16 - 24	NF	2	PLUG	29612	29632	
5/16 - 24	NF	2	BOTT	29613	29633	
5/16 - 24	NF	3	PLUG	29712	29732	
5/16 - 24	NF	3	BOTT	29713	29733	
3/8 - 16	NC	3	PLUG	29812	29832	29852
3/8 - 16	NC	3	BOTT	29813	29833	29853
3/8 - 24	NF	3	PLUG	29912	29932	
3/8 - 24	NF	3	BOTT	29913	29933	
7/16 - 14	NC	3	PLUG	30012	30032	30052
7/16 - 14	NC	3	BOTT	30013	30033	30053
7/16 - 20	NF	3	PLUG	30112	30132	30152
7/16 - 20	NF	3	BOTT	30113	30133	30153
1/2 - 13	NC	3	PLUG	30212	30232	30252
1/2 - 13	NC	3	BOTT	30213	30233	30253
1/2 - 20	NF	3	PLUG	30312	30332	30352
1/2 - 20	NF	3	BOTT	30313	30333	30353
9/16 - 12	NC	3	PLUG		30362	
9/16 - 12	NC	3	BOTT		30363	
9/16 - 18	NF	3	PLUG		30367	
9/16 - 18	NF	3	BOTT		30368	
5/8 - 11	NC	3	PLUG		30372	
5/8 - 11	NC	3	BOTT		30373	
5/8 - 18	NF	3	PLUG		30382	
5/8 - 18	NF	3	BOTT		30383	
3/4 - 10	NC	4	PLUG		30392	
3/4 - 10	NC	4	BOTT		30393	
3/4 - 16	NF	4	PLUG		30397	
3/4 - 16	NF	4	BOTT		30398	

HEAVY DUTY SPIRAL FLUTED 45° MACHINE SCREW TAPS

LIST 101HD

Plug
Bottom



TAP SIZE	SERIES DESIGN.	NO. OF FLUTES	STYLE	EDP NUMBER		
				H-1	H-2	H-3
3 - 48	NC	2	PLUG	64001	64002	
3 - 48	NC	2	BOTT	64003	64004	
3 - 56	NF	2	PLUG	64011	64012	
3 - 56	NF	2	BOTT	64013	64014	
4 - 40	NC	2	PLUG	64021	64022	
4 - 40	NC	2	BOTT	64023	64024	
4 - 48	NF	2	PLUG	64031	64032	
4 - 48	NF	2	BOTT	64033	64034	
5 - 40	NC	2	PLUG	64041	64042	
5 - 40	NC	2	BOTT	64043	64044	
5 - 44	NF	2	PLUG	64051	64052	
5 - 44	NF	2	BOTT	64053	64054	
6 - 32	NC	2	PLUG	64061		64062
6 - 32	NC	2	BOTT	64063		64064
6 - 40	NF	2	PLUG	64071	64072	
6 - 40	NF	2	BOTT	64073	64074	
8 - 32	NC	2	PLUG	64081		64082
8 - 32	NC	2	BOTT	64083		64084
8 - 36	NF	2	PLUG	64091	64092	
8 - 36	NF	2	BOTT	64093	64094	
10 - 24	NC	3	PLUG	64101		64102
10 - 24	NC	3	BOTT	64103		64104
10 - 32	NF	3	PLUG	64111		64112
10 - 32	NF	3	BOTT	64113		64114
12 - 24	NC	3	PLUG	64121		64122
12 - 24	NC	3	BOTT	64123		64124
12 - 28	NF	3	PLUG	64131		64132
12 - 28	NF	3	BOTT	64133		64134

See page 87 for Tap Recommendations for Classes 2B & 3B.
See page 89 for Tap Dimensions.

HEAVY DUTY SPIRAL FLUTED 45° FRACTIONAL TAPS

LIST 106HD

Plug
Bottom



TAP SIZE	SERIES DESIGN.	NO. OF FLUTES	STYLE	EDP NUMBER			
				H-1	H-3	H-4	H-5
1/4 - 20	NC	3	PLUG	64141	64142		64143
1/4 - 20	NC	3	BOTT	64144	64145		64146
1/4 - 28	NF	3	PLUG	64151	64152		
1/4 - 28	NF	3	BOTT	64153	64154		
5/16 - 18	NC	3	PLUG	64161	64162		64163
5/16 - 18	NC	3	BOTT	64164	64165		64166
5/16 - 24	NF	3	PLUG	64171	64172		
5/16 - 24	NF	3	BOTT	64173	64174		
3/8 - 16	NC	3	PLUG	64181	64182		64183
3/8 - 16	NC	3	BOTT	64184	64185		64186
3/8 - 24	NF	3	PLUG	64191	64192		
3/8 - 24	NF	3	BOTT	64193	64194		
7/16 - 14	NC	3	PLUG	64201	64202		64203
7/16 - 14	NC	3	BOTT	64204	64205		64206
7/16 - 20	NF	3	PLUG	64211	64212		64213
7/16 - 20	NF	3	BOTT	64214	64215		64216
1/2 - 13	NC	3	PLUG	64221	64222		64223
1/2 - 13	NC	3	BOTT	64224	64225		64226
1/2 - 20	NF	3	PLUG	64231	64232		64233
1/2 - 20	NF	3	BOTT	64234	64235		64236
9/16 - 12	NC	3	PLUG		64241		64242
9/16 - 12	NC	3	BOTT		64243		64244
9/16 - 18	NF	3	PLUG	64251	64252		
9/16 - 18	NF	3	BOTT	64253	64254		
5/8 - 11	NC	4	PLUG		64261		64262
5/8 - 11	NC	4	BOTT		64263		64264
5/8 - 18	NF	4	PLUG	64271	64272		
5/8 - 18	NF	4	BOTT	64273	64274		
3/4 - 10	NC	4	PLUG		64281		64282
3/4 - 10	NC	4	BOTT		64283		64284
3/4 - 16	NF	4	PLUG	64291	64292		
3/4 - 16	NF	4	BOTT	64293	64294		
7/8 - 9	NC	4	PLUG			64295	
7/8 - 9	NC	4	BOTT			64297	
1 - 8	NC	4	PLUG			64298	
1 - 8	NC	4	BOTT			64299	

FAST SPIRAL FLUTED 52° MACHINE SCREW TAPS

LIST 101F

Plug
Bottom



TAP SIZE	SERIES DESIGN.	NO. OF FLUTES	STYLE	EDP NUMBER		
				H-1	H-2	H-3
3 - 48	NC	2	PLUG	19912	19922	
3 - 48	NC	2	BOTT	19913	19923	
3 - 56	NF	2	PLUG	20012	20022	
3 - 56	NF	2	BOTT	20013	20023	
4 - 40	NC	2	PLUG	20112	20122	
4 - 40	NC	2	BOTT	20113	20123	
4 - 48	NF	2	PLUG	20212	20222	
4 - 48	NF	2	BOTT	20213	20223	
5 - 40	NC	2	PLUG	20312	20322	
5 - 40	NC	2	BOTT	20313	20323	
5 - 44	NF	2	PLUG	20412	20422	
5 - 44	NF	2	BOTT	20413	20423	
6 - 32	NC	3	PLUG	20512		20532
6 - 32	NC	3	BOTT	20513		20533
6 - 40	NF	3	PLUG	20612	20622	
6 - 40	NF	3	BOTT	20613	20623	
8 - 32	NC	3	PLUG	20712		20732
8 - 32	NC	3	BOTT	20713		20733
8 - 36	NF	3	PLUG	20812	20822	
8 - 36	NF	3	BOTT	20813	20823	
10 - 24	NC	3	PLUG	20912		20932
10 - 24	NC	3	BOTT	20913		20933
10 - 32	NF	3	PLUG	21012		21032
10 - 32	NF	3	BOTT	21013		21033
12 - 24	NC	3	PLUG	21112		21132
12 - 24	NC	3	BOTT	21113		21133
12 - 28	NF	3	PLUG	21212		21232
12 - 28	NF	3	BOTT	21213		21233

See page 87 for Tap Recommendations for Classes 2B & 3B.
See page 89 for Tap Dimensions.

FAST SPIRAL FLUTED 52° FRACTIONAL TAPS

LIST 106F

**Plug
Bottom**



TAP SIZE	SERIES DESIGN.	NO. OF FLUTES	STYLE	EDP NUMBER		
				H-1	H-3	H-5
1/4 - 20	NC	3	PLUG	28501	28507	28511
1/4 - 20	NC	3	BOTT	28502	28508	28512
1/4 - 28	NF	3	PLUG	28517	28521	
1/4 - 28	NF	3	BOTT	28518	28522	
5/16 - 18	NC	3	PLUG	28531	28537	28539
5/16 - 18	NC	3	BOTT	28532	28538	28541
5/16 - 24	NF	3	PLUG	28547	28551	
5/16 - 24	NF	3	BOTT	28548	28552	
3/8 - 16	NC	3	PLUG	28561	28577	28581
3/8 - 16	NC	3	BOTT	28562	28578	28582
3/8 - 24	NF	3	PLUG	28587	28591	
3/8 - 24	NF	3	BOTT	28588	28592	
7/16 - 14	NC	4	PLUG	28601	28607	28611
7/16 - 14	NC	4	BOTT	28602	28608	28612
7/16 - 20	NF	4	PLUG	28617	28621	28627
7/16 - 20	NF	4	BOTT	28618	28622	28628
1/2 - 13	NC	4	PLUG	28631	28637	28641
1/2 - 13	NC	4	BOTT	28632	28638	28642
1/2 - 20	NF	4	PLUG	28647	28651	28657
1/2 - 20	NF	4	BOTT	28648	28652	28658
9/16 - 12	NC	4	PLUG		28667	28671
9/16 - 12	NC	4	BOTT		28668	28672
9/16 - 18	NF	4	PLUG	28677	28681	
9/16 - 18	NF	4	BOTT	28678	28682	
5/8 - 11	NC	4	PLUG		28697	28701
5/8 - 11	NC	4	BOTT		28698	28702
5/8 - 18	NF	4	PLUG	28707	28711	
5/8 - 18	NF	4	BOTT	28708	28712	
3/4 - 10	NC	4	PLUG		28727	28731
3/4 - 10	NC	4	BOTT		28728	28732
3/4 - 16	NF	4	PLUG	28737	28741	
3/4 - 16	NF	4	BOTT	28738	28742	

OVERSIZE HAND TAPS MACHINE SCREW SIZES

LIST 115A

Plug
Bottom



TAP SIZE	SERIES DESIGN.	NO. OF FLUTES	STYLE	EDP NUMBER		
				H-6	H-7	H-11
4 - 40	NC	3	PLUG	21362	21372	21382
4 - 40	NC	3	BOTT	21363	21373	21383
4 - 48	NF	3	PLUG	21462	21472	
4 - 48	NF	3	BOTT	21463	21473	
5 - 40	NC	3	PLUG	21562	21572	21582
5 - 40	NC	3	BOTT	21563	21573	21583
5 - 44	NF	3	PLUG	21662	21672	
5 - 44	NF	3	BOTT	21663	21673	
6 - 32	NC	3	PLUG	21762	21772	21782
6 - 32	NC	3	BOTT	21763	21773	21783
6 - 40	NF	3	PLUG	21862	21872	
6 - 40	NF	3	BOTT	21863	21873	
8 - 32	NC	3	PLUG	21962	21972	21982
8 - 32	NC	3	BOTT	21963	21973	21983
8 - 36	NF	3	PLUG	22062	22072	
8 - 36	NF	3	BOTT	22063	22073	
10 - 24	NC	3	PLUG	22162	22172	22182
10 - 24	NC	3	BOTT	22163	22173	22183
10 - 32	NF	3	PLUG	22262	22272	22282
10 - 32	NF	3	BOTT	22263	22273	22283

OVERSIZE PRICING POLICY (Based on one shipment)

Applies to regular and spiral point, machine screw and fractional size taps only.

In addition to H-6, H-7 and H-11, machine screw taps and +.005 over basic (H-11) fractional size taps.

Oversize taps H-1 through H-12 take standard prices when minimum quantity is as shown in the table below.

TAP SIZE	MINIMUM QUANTITY FOR STANDARD PRICE
No. 0 through 1/2"	144
9/16 through 1"	48

See page 89 for Tap Dimensions.

OVERSIZE SPIRAL POINT TAPS MACHINE SCREW SIZES

LIST 115

**Spiral Point Plug
 Spiral Point Bottom**



	TAP SIZE	SERIES DESIGN.	NO. OF FLUTES	STYLE	EDP NUMBER		
					H-6	H-7	H-11
	4 - 40	NC	2	SPPT PLUG	22362	22372	22382
	4 - 40	NC	2	SPPT BOTT	22364	22374	
	4 - 48	NF	2	SPPT PLUG	22462	22472	
	4 - 48	NF	2	SPPT BOTT	22464	22474	
	5 - 40	NC	2	SPPT PLUG	22562	22572	22582
	5 - 40	NC	2	SPPT BOTT	22564	22574	
	5 - 44	NF	2	SPPT PLUG	22662	22672	
	5 - 44	NF	2	SPPT BOTT	22664	22674	
	6 - 32	NC	2	SPPT PLUG	22762	22772	22782
	6 - 32	NC	2	SPPT BOTT	22764	22774	
	6 - 40	NF	2	SPPT PLUG	22862	22872	
	6 - 40	NF	2	SPPT BOTT	22864	22874	
	8 - 32	NC	2	SPPT PLUG	22962	22972	22982
	8 - 32	NC	2	SPPT BOTT	22964	22974	
	8 - 36	NF	2	SPPT PLUG	23062	23072	
	8 - 36	NF	2	SPPT BOTT	23064	23074	
	10 - 24	NC	2	SPPT PLUG	23162	23172	23182
	10 - 24	NC	2	SPPT BOTT	23164	23174	
	10 - 32	NF	2	SPPT PLUG	23262	23272	23282
	10 - 32	NF	2	SPPT BOTT	23264	23274	

OVERSIZE PRICING POLICY (Based on one shipment)

Applies to regular and spiral point, machine screw and fractional size taps only.
 In addition to H-6, H-7 and H-11, machine screw taps and +.005 over basic (H-11) fractional size taps.
 Oversize taps H-1 through H-12 take standard prices when minimum quantity is as shown in the table below.

TAP SIZE	MINIMUM QUANTITY FOR STANDARD PRICE
No. 0 through 1/2"	144
9/16 through 1"	48

See page 89 for Tap Dimensions.

+ .005 OVERSIZE HAND AND SPIRAL POINT FRACTIONAL TAPS

LIST 110

Plug
Bottom
Spiral Point Plug



TAP SIZE	SERIES DESIGN.	NO. OF FLUTES	H LIMIT +.005	110		
				PLUG EDP NUMBER	BOTTOM EDP NUMBER	SPPT PLUG EDP NUMBER
1/4 - 20	NC	4	H-11	40573	40575	
1/4 - 20	NC	2	H-11			40474
1/4 - 28	NF	4	H-11	40773	40775	
1/4 - 28	NF	2	H-11			40674
5/16 - 18	NC	4	H-11	40973	40975	
5/16 - 18	NC	3	H-11			40874
5/16 - 24	NF	4	H-11	41173	41175	
5/16 - 24	NF	3	H-11			41074
3/8 - 16	NC	4	H-11	41373	41375	
3/8 - 16	NC	3	H-11			41274
3/8 - 24	NF	4	H-11	41573	41575	
3/8 - 24	NF	3	H-11			41474
7/16 - 14	NC	4	H-11	41773	41775	
7/16 - 14	NC	3	H-11			41674
7/16 - 20	NF	4	H-11	41973	41975	
7/16 - 20	NF	3	H-11			41874
1/2 - 13	NC	4	H-11	42173	42175	
1/2 - 13	NC	3	H-11			42074
1/2 - 20	NF	4	H-11	42373	42375	
1/2 - 20	NF	3	H-11			42274
5/8 - 11	NC	4	H-11	42401	42402	
5/8 - 11	NC	3	H-11			42403
5/8 - 18	NF	4	H-11	42411	42412	
5/8 - 18	NF	3	H-11			42413
3/4 - 10	NC	4	H-11	42421	42422	
3/4 - 10	NC	3	H-11			42423
3/4 - 16	NF	4	H-11	42431	42432	
3/4 - 16	NF	3	H-11			42433
7/8 - 9	NC	4	H-11	42441	42442	
7/8 - 14	NF	4	H-11	42451	42452	
1 - 8	NC	4	H-11	42461	42462	

OVERSIZE PRICING POLICY (Based on one shipment)

Applies to regular and spiral point, machine screw and fractional size taps only.
In addition to H-6, H-7 and H-11, machine screw taps and +.005 over basic (H-11) fractional size taps.
Oversize taps H-1 through H-12 take standard prices when minimum quantity is as shown in the table below.

TAP SIZE	MINIMUM QUANTITY FOR STANDARD PRICE
No. 0 through 1/2"	144
9/16 through 1"	48

FLUTELESS SPIRAL POINT MACHINE SCREW TAPS

LIST 105C

Spiral Point Plug



	TAP SIZE	SERIES DESIGN.	STYLE	EDP NUMBER		
				H-1	H-2	H-3
	3 - 48	NC	SPPT PLUG	36712	36722	
	3 - 56	NF	SPPT PLUG		36822	
	4 - 40	NC	SPPT PLUG	37012	37022	
	4 - 48	NF	SPPT PLUG		37122	
	4 - 36	NS	SPPT PLUG		36922	
	5 - 40	NC	SPPT PLUG		37222	
	5 - 44	NF	SPPT PLUG		37322	
	6 - 32	NC	SPPT PLUG		37422	37432
	6 - 40	NF	SPPT PLUG		37522	
	8 - 32	NC	SPPT PLUG		37622	37632
	10 - 24	NC	SPPT PLUG		37822	37832
	10 - 32	NF	SPPT PLUG	37912	37922	37932
	12 - 24	NC	SPPT PLUG			38032
	12 - 28	NF	SPPT PLUG			38132
	14 - 20	NS	SPPT PLUG			38232

FLUTELESS SPIRAL POINT FRACTIONAL TAPS

LIST 104C

Spiral Point Plug



	TAP SIZE	SERIES DESIGN.	STYLE	EDP NUMBER	
				H-3	H-5
	1/4 - 20	NC	SPPT PLUG	35432	35452
	1/4 - 28	NF	SPPT PLUG	35532	
	5/16 - 18	NC	SPPT PLUG	35632	35652
	5/16 - 24	NF	SPPT PLUG	35732	
	3/8 - 16	NC	SPPT PLUG	35832	35852
	3/8 - 24	NF	SPPT PLUG	35932	
	7/16 - 14	NC	SPPT PLUG	36032	36052
	7/16 - 20	NF	SPPT PLUG	36132	
	1/2 - 13	NC	SPPT PLUG	36232	
	1/2 - 20	NF	SPPT PLUG	36332	

INTERRUPTED THREAD FRACTIONAL TAPS

LIST 108

Taper
Plug
Bottom



TAP SIZE	SERIES DESIGN.	NO. OF FLUTES	H LIMIT	108		
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER
1/4 - 20	NC	3	H-3	39231	39232	39233
1/4 - 28	NF	3	H-3	39331	39332	39333
5/16 - 18	NC	3	H-3	39431	39432	39433
5/16 - 24	NF	3	H-3	39531	39532	39533
3/8 - 16	NC	3	H-3	39631	39632	39633
3/8 - 24	NF	3	H-3	39731	39732	39733
1/2 - 13	NC	3	H-3		39742	39743
1/2 - 20	NF	3	H-3		39762	39763
5/8 - 11	NC	3	H-3		39772	39773

INTERRUPTED THREAD SPIRAL POINT FRACTIONAL TAPS

LIST 109

Spiral Point Plug



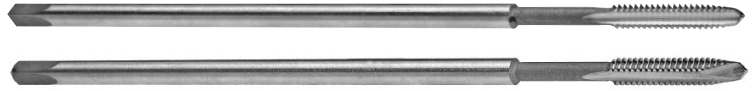
TAP SIZE	SERIES DESIGN.	NO. OF FLUTES	H LIMIT	109
				SPPT PLUG EDP NUMBER
1/4 - 20	NC	3	H-3	39832
1/4 - 28	NF	3	H-3	39932
5/16 - 18	NC	3	H-3	40032
5/16 - 24	NF	3	H-3	40132
3/8 - 16	NC	3	H-3	40232
3/8 - 24	NF	3	H-3	40332
1/2 - 13	NC	3	H-3	40342
1/2 - 20	NF	3	H-3	40352
5/8 - 11	NC	3	H-3	40362
3/4 - 10	NC	3	H-3	40372

See page 89 for Tap Dimensions.

EXTENSION TAPS 6" O/A MACHINE SCREW SIZES

LIST 107

Plug
 Bottom
 Spiral Point Plug



Large Shank with approx. 3/4" Gap

TAP SIZE	SERIES DESIGN.	NO. OF FLUTES	H LIMIT	107		
				PLUG EDP NUMBER	BOTTOM EDP NUMBER	SPPT PLUG EDP NUMBER
6 - 32	NC	3	H-3	38632	38633	
6 - 32	NC	2	H-3			38532
8 - 32	NC	3	H-3	38832	38833	
8 - 32	NC	2	H-3			38732
10 - 24	NC	3	H-3	39024	39025	
10 - 24	NC	2	H-3			38924
10 - 32	NF	3	H-3	39032	39033	
10 - 32	NF	2	H-3			38932

NUT TAPS FRACTIONAL SIZES

LIST 111A

Taper
 Plug



TAP SIZE	SERIES DESIGN.	NO. OF FLUTES	H LIMIT	OVERALL LENGTH	111A	
					TAPER EDP NUMBER	PLUG EDP NUMBER
1/4 - 20	NC	4	H-3	5"	42531	42532
1/4 - 28	NF	4	H-3	5"	42631	42632
5/16 - 18	NC	4	H-3	5 1/2"	42731	42732
5/16 - 24	NF	4	H-3	5 1/2"	42831	42832
3/8 - 16	NC	4	H-3	6"	42931	42932
3/8 - 24	NF	4	H-3	6"	43031	43032
7/16 - 14	NC	4	H-3	6 1/2"	43131	43132
7/16 - 20	NF	4	H-3	6 1/2"	43231	43232
1/2 - 13	NC	4	H-3	7"	43331	43332
1/2 - 20	NF	4	H-3	7"	43431	43432
5/8 - 11	NC	4	H-3	8"	43531	43532
5/8 - 18	NF	4	H-3	8"	43631	43632
3/4 - 10	NC	4	H-3	9"	43731	43732
3/4 - 16	NF	4	H-3	9"	43831	43832
7/8 - 9	NC	4	H-4	10"	43941	43942
7/8 - 14	NF	4	H-4	10"	44041	44042
1 - 8	NC	4	H-4	11"	44141	44142
1 - 14	NS	4	H-4	11"	44241	44242

*For larger quantity prices, consult factory.

PULLEY TAPS FRACTIONAL SIZES

LIST 112P
PULLEY

Plug



TAP SIZE	SERIES DESIGN.	OVERALL LENGTH	NO. OF FLUTES	H LIMIT	SHANK DIAMETER	112P
						PLUG EDP NUMBER
1/4 - 20	NC	4"	4	H-3	.255	45022
1/4 - 20	NC	6"	4	H-3	.255	45032
1/4 - 20	NC	8"	4	H-3	.255	45042
1/4 - 28	NF	6"	4	H-3	.255	44432
5/16 - 18	NC	4"	4	H-3	.318	45122
5/16 - 18	NC	6"	4	H-3	.318	45132
5/16 - 18	NC	8"	4	H-3	.318	45142
5/16 - 24	NF	6"	4	H-3	.318	44532
3/8 - 16	NC	4"	4	H-3	.381	45618
3/8 - 16	NC	6"	4	H-3	.381	45232
3/8 - 16	NC	8"	4	H-3	.381	45242
3/8 - 16	NC	10"	4	H-3	.381	45252
3/8 - 16	NC	12"	4	H-3	.381	45262
3/8 - 24	NF	6"	4	H-3	.381	44632
7/16 - 14	NC	6"	4	H-3	.444	45332
7/16 - 14	NC	8"	4	H-3	.444	45342
7/16 - 14	NC	10"	4	H-3	.444	45352
7/16 - 14	NC	12"	4	H-3	.444	45362
7/16 - 20	NF	6"	4	H-3	.444	44732
1/2 - 13	NC	6"	4	H-3	.507	45432
1/2 - 13	NC	8"	4	H-3	.507	45442
1/2 - 13	NC	10"	4	H-3	.507	45452
1/2 - 13	NC	12"	4	H-3	.507	45472
1/2 - 20	NF	6"	4	H-3	.507	44832
5/8 - 11	NC	6"	4	H-3	.633	45532
5/8 - 11	NC	8"	4	H-3	.633	45542
5/8 - 11	NC	10"	4	H-3	.633	45552
5/8 - 11	NC	12"	4	H-3	.633	45562
5/8 - 11	NC	14"	4	H-3	.633	45572
3/4 - 10	NC	6"	4	H-3	.759	45622
3/4 - 10	NC	8"	4	H-3	.759	45632
3/4 - 10	NC	10"	4	H-3	.759	45652
3/4 - 10	NC	12"	4	H-3	.759	45662
3/4 - 10	NC	14"	4	H-3	.759	45672
7/8 - 9	NC	6"	4	H-4	.885	45810
7/8 - 9	NC	8"	4	H-4	.885	45812
7/8 - 9	NC	10"	4	H-4	.885	45814
1 - 8	NC	8"	4	H-4	1.011	45842
1 - 8	NC	10"	4	H-4	1.011	45852
1 - 8	NC	12"	4	H-4	1.011	45862

*For larger quantity prices, consult factory.

PULLEY TAPS SPIRAL POINT MACHINE SCREW AND FRACTIONAL SIZES

**LIST 112SP
PULLEY**

Spiral Point Plug



TAP SIZE	SERIES DESIGN.	OVERALL LENGTH	NO. OF FLUTES	H LIMIT	112SP
					SPPT PLUG EDP NUMBER
4 - 40	NC	4"	2	H-2	38322
4 - 48	NF	4"	2	H-2	38323
5 - 40	NC	4"	2	H-2	38308
6 - 32	NC	4"	2	H-3	38325
6 - 32	NC	6"	2	H-3	38532
8 - 32	NC	4"	2	H-3	38329
8 - 32	NC	6"	2	H-3	38732
10 - 24	NC	4"	2	H-3	38346
10 - 24	NC	6"	2	H-3	38924
10 - 32	NF	4"	2	H-3	38394
10 - 32	NF	6"	2	H-3	38932
1/4 - 20	NC	4"	2	H-3	45704
1/4 - 20	NC	6"	2	H-3	45701
1/4 - 20	NC	8"	2	H-3	45708
1/4 - 28	NF	6"	2	H-3	45724
5/16 - 18	NC	4"	2	H-3	45714
5/16 - 18	NC	6"	2	H-3	45706
5/16 - 18	NC	8"	2	H-3	45710
5/16 - 24	NF	6"	2	H-3	45731
3/8 - 16	NC	4"	3	H-3	45718
3/8 - 16	NC	6"	3	H-3	45711
3/8 - 16	NC	8"	3	H-3	45728
3/8 - 24	NF	6"	3	H-3	45734
7/16 - 14	NC	6"	3	H-3	45713
7/16 - 20	NF	6"	3	H-3	45715
1/2 - 13	NC	6"	3	H-3	45716
1/2 - 13	NC	8"	3	H-3	45782
1/2 - 20	NF	6"	3	H-3	45717
5/8 - 11	NC	6"	3	H-3	45721
5/8 - 11	NC	8"	3	H-3	45929
3/4 - 10	NC	6"	3	H-3	45774
3/4 - 10	NC	8"	3	H-3	45776

*For larger quantity prices, consult factory.

SMALL SHANK EXTENSION TAPS

LIST 113P
EXTENSION

Plug



TAP SIZE	SERIES DESIGN.	OVERALL LENGTH	NO. OF FLUTES	H LIMIT	SHANK DIAMETER	113P
						PLUG EDP NUMBER
6 - 32	NC	6"	3	H-3	.097	38332
8 - 32	NC	6"	3	H-3	.123	38331
10 - 24	NC	6"	3	H-3	.136	38342
10 - 32	NF	6"	3	H-3	.136	39014
1/4 - 20	NC	4"	4	H-3	.185	45612
1/4 - 20	NC	6"	4	H-3	.185	45681
1/4 - 28	NF	6"	4	H-3	.185	45719
5/16 - 18	NC	4"	4	H-3	.240	45614
5/16 - 18	NC	6"	4	H-3	.240	45683
5/16 - 24	NF	6"	4	H-3	.240	45631
3/8 - 16	NC	4"	4	H-3	.275	45779
3/8 - 16	NC	6"	4	H-3	.275	45685
3/8 - 16	NC	8"	4	H-3	.275	45686
3/8 - 24	NF	6"	4	H-3	.275	45641
1/2 - 13	NC	4"	4	H-3	.367	45748
1/2 - 13	NC	6"	4	H-3	.367	45687
1/2 - 13	NC	8"	4	H-3	.367	45668
1/2 - 20	NF	6"	4	H-3	.367	45661
5/8 - 11	NC	6"	4	H-3	.480	45689
5/8 - 11	NC	8"	4	H-3	.480	45952
5/8 - 18	NF	6"	4	H-3	.480	44956
3/4 - 10	NC	6"	4	H-3	.590	45831
3/4 - 10	NC	8"	4	H-3	.590	45832
3/4 - 10	NC	10"	4	H-3	.590	45834
3/4 - 16	NF	6"	4	H-3	.590	45789
7/8 - 9	NC	6"	4	H-4	.697	45741
7/8 - 9	NC	8"	4	H-4	.697	45761
7/8 - 9	NC	10"	4	H-4	.697	45771
7/8 - 9	NC	12"	4	H-4	.697	45772
1 - 8	NC	6"	4	H-4	.800	45839
1 - 8	NC	8"	4	H-4	.800	45841
1 - 8	NC	10"	4	H-4	.800	45851
1 - 8	NC	12"	4	H-4	.800	45859

*For larger quantity prices, consult factory.

SMALL SHANK SPIRAL POINT EXTENSION TAPS

**LIST 113SP
EXTENSION**

Spiral Point Plug



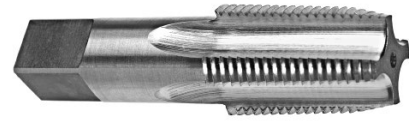
TAP SIZE	SERIES DESIGN.	OVERALL LENGTH	NO. OF FLUTES	H LIMIT	SHANK DIAMETER	113SP
						SPPT PLUG EDP NUMBER
4 - 40	NC	4"	2	H-2	.080	38302
4 - 48	NF	4"	2	H-2	.080	38304
5 - 40	NC	4"	2	H-2	.093	38312
6 - 32	NC	4"	2	H-3	.097	38324
6 - 32	NC	6"	2	H-3	.097	38326
8 - 32	NC	4"	2	H-3	.123	38328
8 - 32	NC	6"	2	H-3	.123	38330
10 - 24	NC	4"	2	H-3	.136	38341
10 - 24	NC	6"	2	H-3	.136	38343
10 - 32	NF	4"	2	H-3	.136	38992
10 - 32	NF	6"	2	H-3	.136	39012
1/4 - 20	NC	4"	2	H-3	.185	45619
1/4 - 20	NC	6"	2	H-3	.185	45732
1/4 - 28	NF	6"	2	H-3	.185	45722
5/16 - 18	NC	4"	2	H-3	.240	45753
5/16 - 18	NC	6"	2	H-3	.240	45737
5/16 - 24	NF	6"	2	H-3	.240	45723
3/8 - 16	NC	4"	3	H-3	.275	45778
3/8 - 16	NC	6"	3	H-3	.275	45742
3/8 - 16	NC	8"	3	H-3	.275	45738
3/8 - 24	NF	6"	3	H-3	.275	45743
7/16 - 14	NC	6"	3	H-3	.323	45792
7/16 - 20	NF	6"	3	H-3	.323	45745
1/2 - 13	NC	4"	3	H-3	.367	45744
1/2 - 13	NC	6"	3	H-3	.367	45747
1/2 - 13	NC	8"	3	H-3	.367	45665
1/2 - 20	NF	6"	3	H-3	.367	45749
5/8 - 11	NC	6"	3	H-3	.480	45752
5/8 - 11	NC	8"	3	H-3	.480	45932
5/8 - 18	NF	6"	3	H-3	.480	45922
3/4 - 10	NC	6"	3	H-3	.590	45756
3/4 - 10	NC	8"	3	H-3	.590	45835
3/4 - 10	NC	10"	3	H-3	.590	45783
3/4 - 16	NF	6"	3	H-3	.590	45784

*For larger quantity prices, consult factory.

TAPER PIPE TAPS REGULAR & ECONOMY GROUND THREADS

LIST 120G
LIST 120DS
LIST 120C

NPT Ground Thread Regular
NPTF Ground Thread Regular
NPT Economy Ground Thread Regular



TAP SIZE	NO. OF FLUTES	120G	120DS	120C
		NPT REGULAR EDP NUMBER	NPTF REGULAR EDP NUMBER	NPT ECONOMY EDP NUMBER
1/16 - 27	4	46102	46202	-
1/8 - 27	4	46104	46204	46004
1/8 - 27	5	46106	46206	46006
1/8 - 27 sm sh*	4	46107	46207	46007
1/8 - 27 sm sh*	5	46108	46208	46008
1/4 - 18	4	46110	46210	46010
1/4 - 18	5	46112	46212	46012
3/8 - 18	4	46116	46216	46016
3/8 - 18	5	46118	46218	46018
1/2 - 14	4	46122	46222	46022
1/2 - 14	5	46124	46224	46024
3/4 - 14	5	46128	46228	46028
1 - 11 1/2	5	46132	46232	46032
1 1/4 - 11 1/2	5	46136	46236	46036
1 1/2 - 11 1/2	7	46138	46240	46040
2 - 11 1/2	7	46144	46244	46044
2 1/2 - 8	7	46148	46248	46048
3 - 8	8	46152	46252	46052
3 1/2 - 8	8	46158	46258	46058
4 - 8	8	46160	46260	46060

*Small Shank .3125

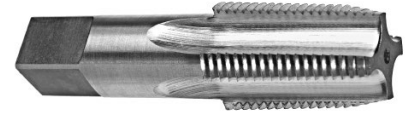
See page 92 for Pipe Tap Dimensions.

NOTE: ECONOMY GROUND THREAD PIPE TAPS are economical Production Taps made here to the same general thread specifications as Ground Thread Taps. Economy Thread Pipe Taps are supplied with Oxide Surface Treatment only.

TAPER PIPE TAPS HIGH HOOK REGULAR THREAD

LIST 120GH
 LIST 120DSH

NPT Ground Thread Regular
 NPTF Ground Thread Regular



TAP SIZE	NO. OF FLUTES	120GH	120DSH
		NPT REGULAR EDP NUMBER	NPTF REGULAR EDP NUMBER
1/16 - 27	4	46442	46443
1/8 - 27	4	46446	46447
1/8 - 27	5	46450	46451
1/8 - 27 sm sh*	4	46454	46455
1/8 - 27 sm sh*	5	46456	46457
1/4 - 18	4	46460	46461
1/4 - 18	5	46462	46463
3/8 - 18	4	46466	46467
3/8 - 18	5	46468	46469
1/2 - 14	4	46472	46473
1/2 - 14	5	46474	46475
3/4 - 14	5	46478	46479
1 - 11 1/2	5	46482	46483
1 1/4 - 11 1/2	5	46486	46487
1 1/2 - 11 1/2	7	46490	46491
2 - 11 1/2	7	46494	46495

BRITISH INTERNAL STRAIGHT PIPE TAPS FOR MECHANICAL JOINTS

LIST 122P
 BSPP

Ground Thread Regular Plug
 Ground Thread Regular Bottom
 (British Parallel Pipe 55° Whitworth - Full Form)

Reference BS2779



TAP SIZE	NO. OF FLUTES	HOLE SIZE	122P	
			BSPP PLUG EDP NUMBER	BSPP BOTTOM EDP NUMBER
1/8 - 28 (G 1/8)	4	.3372 - .3488	47050	47051
1/4 - 19 (G 1/4)	4	.4505 - .4680	47052	47053
3/8 - 19 (G 3/8)	4	.5885 - .6060	47054	47055
1/2 - 14 (G 1/2)	4	.7335 - .7548	47056	47057
3/4 - 14 (G 3/4)	5	.9495 - .9707	47058	47059
1 - 11 (G 1)	5	1.1926 - 1.2178	47060	47061
1 1/4 - 11 (G 1 1/4)	5	1.5335 - 1.5887	47062	47063
1 1/2 - 11 (G 1 1/2)	7	1.7655 - 1.7907	47064	47065
2 - 11 (G 2)	7	2.2306 - 2.2558	47066	47067

*Small Shank .3125

TAPER PIPE TAPS HIGH HOOK INTERRUPTED THREAD

LIST 114GH
LIST 114DSH

NPT Ground Thread Interrupted
NPTF Ground Thread Interrupted



TAP SIZE	NO. OF FLUTES	114GH	114DSH
		NPT INTERRUPTED EDP NUMBER	NPTF INTERRUPTED EDP NUMBER
1/8 - 27	5	46452	46453
1/8 - 27 sm sh*	5	46458	46459
1/4 - 18	5	46464	46465
3/8 - 18	5	46470	46471
1/2 - 14	5	46476	46477
3/4 - 14	5	46480	46481
1 - 11 1/2	5	46484	46485
1 1/4 - 11 1/2	5	46488	46489
1 1/2 - 11 1/2	7	46492	46493
2 - 11 1/2	7	46496	46497

BRITISH INTERNAL TAPER PIPE TAPS FOR PRESSURE TIGHT JOINTS REGULAR GROUND THREAD

LIST 123
BSPT (R_c)

Reference: BS21 ISO 7/1

2 1/2 - 3 Threads Chamfer

(British Taper Pipe 55° Whitworth - Full Form)



TAP SIZE	NO. OF FLUTES	BSPT (R _c) STANDARD PROJECTIONS	DRILL DIAMETER		123
			WITHOUT REAMER	WITH REAMER	BSPT EDP NUMBER
1/8 - 28 (R _c 1/8)	4	.206 ± .035	8.40MM	8.00MM	47070
1/4 - 19 (R _c 1/4)	4	.304 ± .050	11.20MM	10.80MM	47074
3/8 - 19 (R _c 3/8)	4	.306 ± .050	14.75MM	14.25MM	47078
1/2 - 14 (R _c 1/2)	4	.416 ± .070	18.25MM	17.75MM	47080
3/4 - 14 (R _c 3/4)	5	.413 ± .070	23.75MM	23.00MM	47082
1 - 11 (R _c 1)	5	.525 ± .080	30.00MM	29.00MM	47084
1 1/4 - 11 (R _c 1 1/4)	5	.524 ± .080	38.50MM	37.50MM	47086
1 1/2 - 11 (R _c 1 1/2)	7	.524 ± .090	44.50MM	43.50MM	47088

*Small Shank .3125

TAPER PIPE TAPS GROUND & ECONOMY GROUND INTERRUPTED THREADS

**LIST 114G
LIST 114DS
LIST 114C**

**NPT Ground Thread Interrupted
NPTF Ground Thread Interrupted
NPT Economy Ground Thread Interrupted**

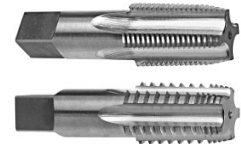


TAP SIZE	NO. OF FLUTES	114G	114DS	114C
		NPT INTERRUPTED EDP NUMBER	NPTF INTERRUPTED EDP NUMBER	NPT ECONOMY EDP NUMBER
1/16 - 27	5	46602	46702	-
1/8 - 27	5	46604	46704	46504
1/8 - 27 sm sh*	5	46606	46706	46506
1/4 - 18	5	46612	46712	46512
3/8 - 18	5	46618	4671	46518
1/2 - 14	5	46624	46724	46524
3/4 - 14	5	46628	46728	46528
1 - 11 1/2	5	46632	46732	46532
1 1/4 - 11 1/2	5	46636	46736	46536
1 1/2 - 11 1/2	7	46640	46740	46540
2 - 11 1/2	7	46644	46744	46544

TAPER PIPE TAPS PTF SAE SHORT PROJECTION REGULAR & INTERRUPTED THREADS

**LIST 121DS
LIST 115DS**

**PTF SAE Ground Thread Regular
PTF SAE Ground Thread Interrupted**



TAP SIZE	NO. OF FLUTES	121DS	NO. OF FLUTES	115DS
		PTF SAE REGULAR EDP NUMBER		PTF SAE INTERRUPTED EDP NUMBER
1/16 - 27	4	47001	-	-
1/8 - 27	4	47003	5	47107
1/8 - 27 sm sh*	4	47007	5	47111
1/4 - 18	4	47009	5	47113
3/8 - 18	4	47015	5	47119
1/2 - 14	4	47021	5	47125
3/4 - 14	5	47027	5	47129
1 - 11 1/2	5	47031	5	47133
1 1/4 - 11 1/2	5	47035	5	47137
1 1/2 - 11 1/2	7	47039	7	47141
2 - 11 1/2	7	47043	7	47145

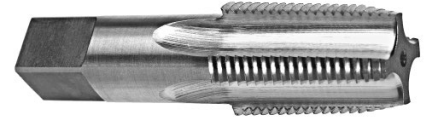
*Small Shank .3125

TAPER PIPE TAPS CAST IRON DESIGN REGULAR THREAD

LIST 120GCI
LIST 120DSCI
LIST 121DSCI

NPT Ground Thread Regular
NPTF Ground Thread Regular
PTF SAE Ground Thread Regular

Stocked with Nitride Surface Treatment

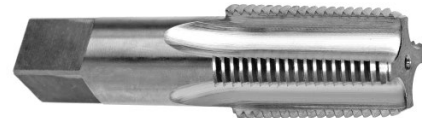


TAP SIZE	NO. OF FLUTES	120GCI	120DSCI	121DSCI
		NPT REGULAR EDP NUMBER	NPTF REGULAR EDP NUMBER	PTF SAE REGULAR EDP NUMBER
1/16 - 27	4	46162	46262	47068
1/8 - 27	4	46164	46264	47069
1/4 - 18	4	46170	46270	47071
3/8 - 18	4	46176	46276	47075
1/2 - 14	4	46182	46282	47081
3/4 - 14	5	46188	46288	47087
1 - 11 1/2	5	46192	46292	47091
1 1/4 - 11 1/2	5	46196	46296	47095
1 1/2 - 11 1/2	7	46198	46298	47098
2 - 11 1/2	7	46199	46299	47099

TAPER PIPE TAPS BOTTOM CHAMFER REGULAR THREAD

LIST 120GB
LIST 120DSB

NPT Ground Thread Regular Bottom
NPTF Ground Thread Regular Bottom



TAP SIZE	NO. OF FLUTES	120GB	120DSB
		NPT REGULAR EDP NUMBER	NPTF REGULAR EDP NUMBER
1/16 - 27	4	46101	46201
1/8 - 27	4	46105	46205
1/4 - 18	4	46111	46211
3/8 - 18	4	46117	46217
1/2 - 14	4	46123	46223
3/4 - 14	5	46130	46230
1 - 11 1/2	5	46133	46233
1 1/4 - 11 1/2	5	46137	46237
1 1/2 - 11 1/2	7	46139	46239
2 - 11 1/2	7	46145	46245

TAPER PIPE TAPS CAST IRON DESIGN INTERRUPTED THREAD

LIST 114GCI
 LIST 114DSCI
 LIST 115DSCI

NPT Ground Thread Interrupted
 NPTF Ground Thread Interrupted
 PTF SAE Ground Thread Interrupted

Stocked with Nitride Surface Treatment

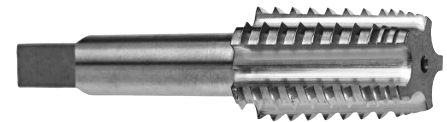


TAP SIZE	NO. OF FLUTES	114GCI	114DSCI	115DSCI
		NPT INTERRUPTED EDP NUMBER	NPTF INTERRUPTED EDP NUMBER	PTF SAE INTERRUPTED EDP NUMBER
1/8 - 27	5	46654	46754	47157
1/4 - 18	5	46662	46762	47163
3/8 - 18	5	46668	46768	47169
1/2 - 14	5	46674	46774	47175
3/4 - 14	5	46678	46778	47179
1 - 11 1/2	5	46682	46782	47183
1 1/4 - 11 1/2	5	46686	46786	47187
1 1/2 - 11 1/2	7	46690	46790	47191
2 - 11 1/2	7	46694	46794	47195

TAPER PIPE TAPS SMALL SHANK (.480) INTERRUPTED THREAD

LIST 118GI
 LIST 118DSI

NPT Ground Thread Interrupted
 NPTF Ground Thread Interrupted



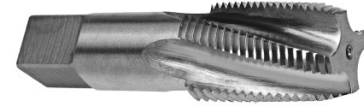
TAP SIZE	NO. OF FLUTES	OVERALL LENGTH	THREAD LENGTH	118GI	118DSI
				NPT INTERRUPTED EDP NUMBER	NPTF INTERRUPTED EDP NUMBER
1/4 - 18	5	3-1/16	1-1/16	46421	46426
3/8 - 18	5	3-1/16	1-1/16	46423	46428
1/2 - 14	5	3-3/8	1-3/8	46425	46430

See page 92 for Pipe Tap Dimensions.

TAPER PIPE TAPS SPIRAL FLUTED 15° SPIRAL REGULAR THREAD

LIST 120GS
LIST 120DSS

NPT Ground Thread Regular
NPTF Ground Thread Regular

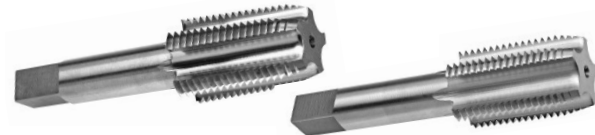


TAP SIZE	NO. OF FLUTES	120GS	120DSS
		NPT REGULAR EDP NUMBER	NPTF REGULAR EDP NUMBER
1/8 - 27	4	46801	46802
1/4 - 18	4	46803	46804
3/8 - 18	4	46805	46806
1/2 - 14	4	46807	46808
3/4 - 14	5	46809	46810
1 - 11 1/2	5	46811	46812

TAPER & STRAIGHT PIPE TAPS SMALL SHANK (.480) REGULAR THREAD

LIST 118G
LIST 118DS
LIST 118BG
LIST 118BF

NPT Ground Thread Regular
NPTF Ground Thread Regular
NPS Ground Thread Regular
NPSF Ground Thread Regular



TAP SIZE	NO. OF FLUTES	OVERALL LENGTH	THREAD LENGTH	118G	118DS	118BG	118BF
				NPT REGULAR EDP NO.	NPTF REGULAR EDP NO.	NPS REGULAR EDP NO.	NPSF REGULAR EDP NO.
1/4 - 18	5	3-1/16	1-1/16	46401	46406	46411	46416
3/8 - 18	5	3-1/16	1-1/16	46403	46408	46413	46418
1/2 - 14	5	3-3/8	1-3/8	46405	46410	46415	46420

NOTE: When ordering Pipe Taps please specify the material being tapped such as Cast Iron, Bronze, Stainless Steel & etc. so that the proper tap design and surface treatment can be furnished.

SPECIAL PROJECTION TAPER PIPE TAPS – STRAIGHT FLUTE 1/16" to 3/4" Taper Pipe Taps with standard projection tolerances are priced at the standard catalog price when 12 or more are ordered. Quantities less than 12 will receive special pricing. 1" through 2" Taper Pipe Taps with standard projection tolerances are priced at the standard catalog price when 6 or more are ordered. Quantities less than 6 will receive special pricing.

“CONTRU” RELIEF TAPER PIPE TAPS: Taper Pipe Taps with “Contru” relief are designed to eliminate the stop marks and to tap true round holes in Cast Iron, Mild Steel, Brass, Bronze and Aluminum. “Contru” relieved Taper Pipe Taps are furnished at the standard catalog price in plug chamfer only.

TAPER PIPE TAPS 4" & 6" OVERALL LENGTH REGULAR & INTERRUPTED THREADS

**LIST 126G
 LIST 126DS
 LIST 126GI
 LIST 126DSI**

**NPT Ground Thread Regular
 NPTF Ground Thread Regular
 NPT Ground Thread Interrupted
 NPTF Ground Thread Interrupted**



TAP SIZE	NO. OF FLUTES	OVERALL LENGTH	126G	126DS	126GI	126DSI
			NPT REGULAR EDP NUMBER	NPTF REGULAR EDP NUMBER	NPT INTERRUPTED EDP NUMBER	NPTF INTERRUPTED EDP NUMBER
1/16 - 27	4	4"	46312	46313	-	-
1/16 - 27	4	6"	46314	46315	-	-
1/8 - 27	4	4"	46316	46317	-	-
1/8 - 27	4	6"	46318	46319	-	-
1/8 - 27	5	6"	-	-	46361	46363
1/4 - 18	4	4"	46322	46323	-	-
1/4 - 18	4	6"	46324	46325	-	-
1/4 - 18	5	6"	-	-	46366	46368
3/8 - 18	4	6"	46338	46339	-	-
3/8 - 18	5	6"	-	-	46371	46373
1/2 - 14	4	6"	46342	46343	-	-
1/2 - 14	5	6"	-	-	46376	46378
3/4 - 14	5	6"	46354	46355	-	-
3/4 - 14	5	6"	-	-	46381	46383

STRAIGHT PIPE TAPS REGULAR & ECONOMY GROUND THREADS

**LIST 120BG
 LIST 120BF
 LIST 120B**

**NPS Ground Thread Regular
 NPSF Ground Thread Regular
 NPS Economy Ground Thread Regular**



TAP SIZE	NO. OF FLUTES	120BG	120BF	120B
		NPS REGULAR EDP NUMBER	NPSF REGULAR EDP NUMBER	NPS ECONOMY EDP NUMBER
1/8 - 27	4	46941	46961	46901
1/8 - 27 sm sh*	4	46942	46962	46902
1/4 - 18	4	46943	46963	46903
3/8 - 18	4	46945	46965	46905
1/2 - 14	4	46947	46967	46907
3/4 - 14	5	46949	46969	46909
1 - 11 1/2	5	46951	46971	46911
1 1/4 - 11 1/2	5	46953	46972	-
1 1/2 - 11 1/2	7	46955	46974	-
2 - 11 1/2	7	46957	46976	-

*Small Shank .3125

H.S.S. COMBINED TAPS AND DRILLS

LIST 19

Ground Thread - Class 2B & 6H Fit



TAP SIZE	SERIES DESIG.	THREAD LIMIT	NO. OF FLUTES	OVERALL LENGTH	THREAD LENGTH	DRILL LENGTH	DRILL DIA.	SHANK DIA.	SQUARE SIZE	EDP NUMBER
MACHINE SCREW SIZES										
4 - 40	NC	H-2	2	1-7/8	3/8	1/4	.0910	.141	.110X3/16	16140
4 - 48	NF	H-2	2	1-7/8	3/8	1/4	.0945	.141	.110X3/16	16141
5 - 40	NC	H-2	2	1-15/16	13/32	9/32	.1040	.141	.110X3/16	16142
5 - 44	NF	H-2	2	1-15/16	13/32	9/32	.1060	.141	.110X3/16	16143
6 - 32	NC	H-3	2	2	7/16	5/16	.1110	.141	.110X3/16	16144
6 - 40	NF	H-2	2	2	7/16	5/16	.1170	.141	.110X3/16	16145
8 - 32	NC	H-3	2	2-1/8	1/2	3/8	.1375	.168	.131X1/4	16146
8 - 36	NF	H-2	2	2-1/8	1/2	3/8	.1405	.168	.131X1/4	16147
10 - 24	NC	H-3	2	2-3/8	5/8	13/32	.1545	.194	.152X1/4	16148
10 - 32	NF	H-3	2	2-3/8	5/8	13/32	.1635	.194	.152X1/4	16149
12 - 24	NC	H-3	2	2-3/8	21/32	15/32	.1805	.220	.165X9/32	16150
12 - 28	NF	H-3	2	2-3/8	21/32	15/32	.1860	.220	.165X9/32	16151
FRACTIONAL SIZES										
1/4 - 20	NC	H-5	2	2-1/2	25/32	17/32	.2080	.255	.191X5/16	16152
1/4 - 28	NF	H-4	2	2-1/2	25/32	17/32	.2200	.255	.191X5/16	16153
5/16 - 18	NC	H-5	2	2-27/32	15/16	11/16	.2660	.318	.238X3/8	16154
5/16 - 24	NF	H-4	2	2-27/32	15/16	11/16	.2770	.318	.238X3/8	16155
3/8 - 16	NC	H-5	2	3-3/8	1-1/16	13/16	.3225	.381	.286X7/16	16156
3/8 - 24	NF	H-4	2	3-3/8	1-1/16	13/16	.3395	.381	.286X7/16	16157
7/16 - 14	NC	H-5	2	3-3/4	1-1/4	1	.3770	.323	.242X13/32	16158
7/16 - 20	NF	H-5	2	3-3/4	1-1/4	1	.3955	.323	.242X13/32	16159
1/2 - 13	NC	H-5	2	4-1/16	1-3/8	1-1/8	.4350	.367	.275X7/16	16160
1/2 - 20	NF	H-5	2	4-1/16	1-3/8	1-1/8	.4580	.367	.275X7/16	16161
METRIC SIZES										
M3X0.5	-	D-3	2	1-15/16	13/32	9/32	.1015	.141	.110X3/16	16162
M3.5X0.6	-	D-4	2	2	7/16	5/16	.1178	.141	.110X3/16	16164
M4X0.7	-	D-4	2	2-1/8	1/2	3/8	.1340	.168	.131X1/4	16166
M5X0.8	-	D-4	2	2-3/8	5/8	13/32	.1700	.194	.152X1/4	16168
M6X1.0	-	D-5	2	2-1/2	25/32	17/32	.2030	.255	.191X5/16	16170
M8X1.0	-	D-5	2	2-27/32	15/16	11/16	.2820	.318	.238X3/8	16172
M8X1.25	-	D-5	2	2-27/32	15/16	11/16	.2730	.318	.238X3/8	16173
M10X1.25	-	D-5	2	3-3/8	1-1/16	13/16	.3521	.381	.286X7/16	16176
M10X1.5	-	D-6	2	3-3/8	1-1/16	13/16	.3440	.381	.286X7/16	16177
M12X1.25	-	D-5	2	4-1/16	1-3/8	1-1/8	.4310	.367	.275X7/16	1618
M12X1.75	-	D-6	2	4-1/16	1-3/8	1-1/8	.4140	.367	.275X7/16	16181

The Combined Taps and Drills are manufactured to produce a 65% Height of Thread.
The Drill Point is 118° and the Spiral Flutes have approximately 22° Helix Angle.
Recommended for applications having through holes up to twice the depth of the Tap's Nominal Diameter.

STI STRAIGHT FLUTE TAPS

LIST 130

Plug
Bottom



TAP SIZE	NO. OF FLUTES	PLUG STI EDP NUMBER				BOTTOM STI EDP NUMBER			
		H-1	H-2	H-3	H-4	H-1	H-2	H-3	H-4
2 - 56	3	52014	52022			52013	52023		
4 - 40	3	54012	54022			54013	54023		
5 - 40	3	54112	54122			54113	54123		
6 - 32	3		54222	54232			54223	54233	
6 - 40	3	54312	54322			54313	54323		
8 - 32	3		54422	54432			54423	54433	
10 - 24	3		54522	54532			54523	54533	
10 - 32	3		54622	54632			54623	54633	
12 - 24	3		54722	54732			54723	54733	
1/4 - 20	3		54822	54832			54823	54833	
1/4 - 28	3		54922	54932			54923	54933	
5/16 - 18	4			55032	55042			55033	55043
5/16 - 24	4		55122	55132			55123	55133	
3/8 - 16	4			55232	55242			55233	55243
3/8 - 24	4		55322	55332			55323	55333	
7/16 - 14	4			55432	55442			55433	55443
7/16 - 20	4			55532	55542			55533	55543
1/2 - 13	4			55632	55642			55633	55643
1/2 - 20	4			55732	55742			55733	55743
5/8 - 11	4			55752				55753	
5/8 - 18	4			55762				55763	
3/4 - 10	4			55772				55773	
3/4 - 16	4			55782				55783	
7/8 - 9	4				55792				55793
7/8 - 14	4				55802				55803
1 - 8	4				55812				55813
1 - 14	4				55822				55823

STI SPIRAL POINT TAPS

LIST 131

Spiral Point Plug



TAP SIZE	NO. OF FLUTES	SPPT PLUG STI EDP NUMBER			
		H-1	H-2	H-3	H-4
2 - 56	2	53014	53022		
4 - 40	2	56012	56022		
5 - 40	2	56112	56122		
6 - 32	2		56222	56232	
6 - 40	2	56312	56322		
8 - 32	2		56422	56432	
10 - 24	2		56522	56532	
10 - 32	2		56622	56632	
12 - 24	2		56722	56732	
1/4 - 20	2		56822	56832	
1/4 - 28	2		56922	56932	
5/16 - 18	3			57032	57042
5/16 - 24	3		57122	57132	
3/8 - 16	3			57232	57242
3/8 - 24	3		57322	57332	
7/16 - 14	3			57432	57442
7/16 - 20	3			57532	57542
1/2 - 13	3			57632	57642
1/2 - 20	3			57732	57742

STI FAST SPIRAL FLUTED TAPS

LIST 136

Plug
Bottom



TAP SIZE	NO. OF FLUTES	PLUG STI EDP NUMBER				BOTTOM STI EDP NUMBER			
		H-1	H-2	H-3	H-4	H-1	H-2	H-3	H-4
2 - 56	2	70012	70022			70013	70023		
4 - 40	3	70112	70122			70113	70123		
5 - 40	3	70212	70222			70213	70223		
6 - 32	3		70322	70332			70323	70333	
6 - 40	3	70412	70422			70413	70423		
8 - 32	3		70522	70532			70523	70533	
10 - 24	3		70622	70632			70623	70633	
10 - 32	3		70722	70732			70723	70733	
1/4 - 20	3		70822	70832			70823	70833	
1/4 - 28	3		70922	70932			70923	70933	
5/16 - 18	3			71032	71042			71033	71043
5/16 - 24	3		71122	71132			71123	71133	
3/8 - 16	4			71232	71242			71233	71243
3/8 - 24	4		71322	71332			71323	71333	
7/16 - 14	4			71432	71442			71433	71443
7/16 - 20	4			71532	71542			71533	71543
1/2 - 13	4			71632	71642			71633	71643
1/2 - 20	4			71732	71742			71733	71743

METRIC STI STRAIGHT FLUTE TAPS

LIST 130M

Plug
Bottom



TAP SIZE	NO. OF FLUTES	PLUG STI EDP NUMBER				BOTTOM STI EDP NUMBER			
		CLASS 4H 5H FIT		CLASS 5H FIT		CLASS 4H 5H FIT		CLASS 5H FIT	
M2.2X0.45	3	72012	D1	72012	D1	72013	D1	72013	D1
M2.5X0.45	3	72112	D1	72112	D1	72113	D1	72113	D1
M3X0.5	3	72212	D1	72212	D1	72213	D1	72213	D1
M3.5X0.6	3	72312	D1	72322	D2	72313	D1	72323	D2
M4X0.7	3	72412	D1	72422	D2	72413	D1	72423	D2
M5X0.8	3	72512	D1	72522	D2	72513	D1	72523	D2
M6X1.0	3	72622	D2	72632	D3	72623	D2	72633	D3
M8X1.0	4	72722	D2	72732	D3	72723	D2	72733	D3
M8X1.25	4	72822	D2	72832	D3	72823	D2	72833	D3
M10X1.0	4	72922	D2	72932	D3	72923	D2	72933	D3
M10X1.25	4	73022	D2	73032	D3	73023	D2	73033	D3
M10X1.5	4	73132	D3	73142	D4	73133	D3	73143	D4
M12X1.25	4	73232	D3	73242	D4	73233	D3	73243	D4
M12X1.5	4	73332	D3	73352	D5	73333	D3	73353	D5
M12X1.75	4	73432	D3	73452	D5	73433	D3	73453	D5
M14X2.0	4	73542	D4	73552	D5	73543	D4	73553	D5
M14X1.5	4	73632	D3	73652	D5	73633	D3	73653	D5
M16X2.0	4	73742	D4	73752	D5	73743	D4	73753	D5
M16X1.5	4	73832	D3	73852	D5	73833	D3	73853	D5
M18X2.5	4	73942	D4	73962	D6	73943	D4	73963	D6
M18X1.5	4	74032	D3	74052	D5	74033	D3	74053	D5
M20X2.5	4	74142	D4	74162	D6	74143	D4	74163	D6

METRIC STI SPIRAL POINT TAPS

LIST 131M

Spiral Point Plug



TAP SIZE	NO. OF FLUTES	SPPT PLUG STI EDP NUMBER			
		CLASS 4H 5H FIT		CLASS 5H FIT	
M2.2X0.45	2	72017	D1	72017	D1
M2.5X0.45	2	72117	D1	72117	D1
M3X0.5	2	72217	D1	72217	D1
M3.5X0.6	2	72317	D1	72327	D2
M4X0.7	2	72417	D1	72427	D2
M5X0.8	2	72517	D1	72527	D2
M6X1.0	2	72627	D2	72637	D3
M8X1.0	3	72727	D2	72737	D3
M8X1.25	3	72827	D2	72837	D3
M10X1.0	3	72927	D2	72937	D3
M10X1.25	3	73027	D2	73037	D3
M10X1.5	3	73137	D3	73147	D4
M12X1.25	3	73237	D3	73247	D4
M12X1.5	3	73337	D3	73357	D5
M12X1.75	3	73437	D3	73457	D5

METRIC STI FAST SPIRAL FLUTED TAPS

LIST 136M

Plug Bottom



TAP SIZE	NO. OF FLUTES	PLUG STI EDP NUMBER				BOTTOM STI EDP NUMBER			
		CLASS 4H 5H FIT		CLASS 5H FIT		CLASS 4H 5H FIT		CLASS 5H FIT	
M2.2X0.45	2	72018	D1	72018	D1	72019	D1	72019	D1
M2.5X0.45	2	72118	D1	72118	D1	72119	D1	72119	D1
M3X0.5	3	72218	D1	72218	D1	72219	D1	72219	D1
M3.5X0.6	3	72318	D1	72328	D2	72319	D1	72329	D2
M4X0.7	3	72418	D1	72428	D2	72419	D1	72429	D2
M5X0.8	3	72518	D1	72528	D2	72519	D1	72529	D2
M6X1.0	3	72628	D2	72638	D3	72629	D2	72639	D3
M8X1.0	3	72728	D2	72738	D3	72729	D2	72739	D3
M8X1.25	3	72828	D2	72838	D3	72829	D2	72839	D3
M10X1.0	4	72928	D2	72938	D3	72929	D2	72939	D3
M10X1.25	4	73028	D2	73038	D3	73029	D2	73039	D3
M10X1.5	4	73138	D3	73148	D4	73139	D3	73149	D4
M12X1.25	4	73238	D3	73248	D4	73239	D3	73249	D4
M12X1.5	4	73338	D3	73358	D5	73339	D3	73359	D5
M12X1.75	4	73438	D3	73458	D5	73439	D3	73459	D5

SCREW THREAD INSERT (STI) TAP DRILL CHART

NOMINAL THREAD SIZE (COARSE SERIES)	SUGGESTED DRILL SIZE (INCH)		NOMINAL THREAD SIZE	SUGGESTED DRILL SIZE (INCH)	
	ALUMINUM	STEEL, MAGNESIUM PLASTIC		ALUMINUM	STEEL, MAGNESIUM PLASTIC
M2.2X0.45	#42 (.0935)	#42 (.0935)	2 (.086)-56	3/32 (.0938)	#41 (.0960)
M2.5X0.45	#37 (.1040)	#37 (.1040)	3 (.099)-48	#36 (.1065)	7/64 (.1094)
M3X0.5	1/8 (.1250)	1/8 (.1250)	4 (.112)-40	#31 (.1200)	#31 (.1200)
M3.5X0.6	#27 (.1440)	#26 (.1470)	5 (.125)-40	3.4mm (.1339)	#29 (.1360)
M4X0.7	#19 (.1660)	#19 (.1660)	6 (.138)-32	#26 (.1470)	#25 (.1495)
M5X0.8	#5 (.2055)	#4 (.2090)	8 (.164)-32	#17 (.1730)	#16 (.1770)
M6X1	D (.2460)	1/4 (.2500)	10 (.190)-24	13/64 (.2031)	#5 (.2055)
M7X1	L (.2900)	L (.2900)	12 (.216)-24	#1 (.2280)	#1 (.2280)
M8X1.25	21/64 (.3281)	Q (.3320)	1/4 (.2500)-20	H (.2660)	H (.2660)
M10X1.5	Z (.4130)	Z (.4130)	5/16 (.3125)-18	Q (.3320)	Q (.3320)
M12X1.75	31/64 (.4844)	1/2 (.5000)	3/8 (.3750)-16	X (.3970)	X (.3970)
M14X2	37/64 (.5781)	37/64 (.5781)	7/16 (.4375)-14	29/64 (.4531)	29/64 (.4531)
M16X2	21/32 (.6562)	21/32 (.6562)	1/2 (.5000)-13	33/64 (.5156)	17/32 (.5312)
M18X2.5	47/64 (.7344)	47/64 (.7344)	9/16 (.5625)-12	37/64 (.5781)	19/32 (.5938)
M20X2.5	13/16 (.8125)	13/16 (.8125)	5/8 (.6250)-11	21/32 (.6562)	21/32 (.6562)
M22X2.5	57/64 (.8906)	57/64 (.8906)	3/4 (.7500)-10	25/32 (.7812)	25/32 (.7812)
M24X3	63/64 (.9844)	63/64 (.9844)	7/8 (.8750)-9	29/32 (.9062)	29/32 (.9062)
M27X3	1-3/32 (1.0938)	1-3/32 (1.0938)	1 (1.0000)-8	1-1/32 (1.0312)	1-1/32 (1.0312)
M30X3.5	1-7/32 (1.1288)	1-7/32 (1.1288)	1-1/8 (1.1250)-7	1-11/64 (1.1719)	1-11/64 (1.1719)
M33X3.5	1-11/32 (1.3438)	1-11/32 (1.3438)	1-1/4 (1.2500)-7	1-19/64 (1.2969)	1-19/64 (1.2969)
M36X4	1-29/64 (1.4531)	1-15/32 (1.4688)	1-3/8 (1.3750)-6	1-27/64 (1.4219)	1-27/64 (1.4219)
M39X4	1-37/64 (1.5781)	1-37/64 (1.5781)	1-1/2 (1.5000)-6	1-35/64 (1.5469)	1-35/64 (1.5469)
(FINE SERIES)					
M8X1	21/64 (.3281)	21/64 (.3281)	3 (.099)-56	#37 (.1040)	#36 (.1065)
M10X1	Y (.4040)	13/32 (.4062)	4 (.112)-48	3mm (.1181)	#31 (.1200)
M10X1.25	Y (.4040)	13/32 (.4062)	6 (.138)-40	#26 (.1470)	#25 (.1495)
M12X1.25	31/64 (.4844)	31/64 (.4844)	8 (.164)-36	#17 (.1730)	#16 (.1770)
M12X1.5	31/64 (.4844)	1/2 (.5000)	10 (.190)-32	#7 (.2010)	13/64 (.2031)
M14X1.5	9/16 (.5625)	37/64 (.5781)	1/4 (.2500)-28	G (.2610)	6.7mm (.2638)
M16X1.5	41/64 (.6406)	21/32 (.6562)	5/16 (.3125)-24	21/64 (.3281)	21/64 (.3281)
M18X1.5	23/32 (.7188)	47/64 (.7344)	3/8 (.3750)-24	25/64 (.3906)	25/64 (.3906)
M20X1.5	51/64 (.7969)	13/16 (.8125)	7/16 (.4375)-20	29/64 (.4531)	29/64 (.4531)
M22X1.5	7/8 (.8750)	57/64 (.8906)	1/2 (.5000)-20	33/64 (.5156)	33/64 (.5156)
M18X2	47/64 (.7344)	47/64 (.7344)	9/16 (.5625)-18	37/64 (.5781)	37/64 (.5781)
M20X2	13/16 (.8125)	13/16 (.8125)	5/8 (.6250)-18	41/64 (.6406)	41/64 (.6406)
M22X2	57/64 (.8906)	57/64 (.8906)	3/4 (.7500)-16	49/64 (.7656)	49/64 (.7656)
M24X2	31/32 (.9688)	31/32 (.9688)	7/8 (.8750)-14	57/64 (.8906)	57/64 (.8906)
M27X2	1-5/64 (1.0781)	1-3/32 (1.0938)	1 (1.0000)-14	1-1/64 (1.0156)	1-1/32 (1.0312)
M30X2	1-13/64 (1.2031)	1-13/64 (1.2031)	1 (1.0000)-12	1-1/64 (1.0156)	1-1/32 (1.0312)
M33X2	1-5/16 (1.3125)	1-21/64 (1.3281)	1-1/8 (1.1250)-12	1-9/64 (1.1406)	1-5/32 (1.1562)
M36X2	1-7/16 (1.4375)	1-7/16 (1.4375)	1-1/4 (1.2500)-12	1-17/64 (1.2656)	1-9/32 (1.2812)
M39X2	1-35/64 (1.5469)	1-9/16 (1.5625)	1-3/8 (1.3750)-12	1-25/64 (1.3906)	1-13/32 (1.4062)
M36X3	1-29/64 (1.4531)	1-29/64 (1.4531)	1-1/2 (1.5000)-12	1-33/64 (1.5156)	1-17/32 (1.5312)
M39X3	1-9/16 (1.5625)	1-9/16 (1.5625)			

THREAD FORMER SELECTION CHART

TAP SIZE	SERIES DESIGN.	CLASS 2				CLASS 3				CLASS 2B				CLASS 3B			
		H LIMIT	HOLE SIZE			H LIMIT	HOLE SIZE			H LIMIT	HOLE SIZE			H LIMIT	HOLE SIZE		
			75%	65%	55%		75%	65%	55%		75%	65%	55%		75%	65%	55%
0 - 80	NF	H-3	.0539	.0545	.0551	H-2	.0537	.0543	.0549	H-3	.0542	.0548	.0554	H-3	.0539	.0545	.0551
1 - 64	NC	H-3	.0653	.0660	.0668	H-2	.0651	.0658	.0666	H-4	.0657	.0664	.0672	H-3	.0653	.0660	.0668
1 - 72	NF	H-3	.0662	.0668	.0675	H-2	.0659	.0665	.0672	H-4	.0665	.0671	.0678	H-3	.0662	.0668	.0675
2 - 56	NC	H-3	.0772	.0779	.0788	H-3	.0769	.0776	.0785	H-4	.0776	.0783	.0792	H-3	.0772	.0779	.0788
2 - 64	NF	H-3	.0783	.0790	.0798	H-2	.0781	.0788	.0796	H-4	.0787	.0794	.0802	H-3	.0784	.0791	.0799
3 - 48	NC	H-3	.0886	.0895	.0905	H-3	.0883	.0892	.0902	H-4	.0890	.0899	.0909	H-3	.0886	.0895	.0905
3 - 56	NF	H-3	.0901	.0909	.0918	H-3	.0898	.0906	.0915	H-4	.0905	.0913	.0922	H-3	.0901	.0909	.0918
4 - 40	NC	H-3	.0995	.1005	.1018	H-3	.0991	.1001	.1014	H-4	.0999	.1009	.1022	H-3	.0995	.1005	.1018
4 - 48	NF	H-3	.1016	.1025	.1035	H-3	.1013	.1022	.1032	H-4	.1020	.1029	.1039	H-3	.1016	.1025	.1035
5 - 40	NC	H-3	.1124	.1135	.1147	H-3	.1120	.1131	.1143	H-4	.1128	.1139	.1151	H-4	.1124	.1135	.1147
5 - 44	NF	H-3	.1136	.1144	.1156	H-3	.1133	.1141	.1153	H-4	.1141	.1149	.1161	H-3	.1137	.1145	.1157
6 - 32	NC	H-4	.1221	.1234	.1250	H-3	.1217	.1230	.1246	H-5	.1226	.1239	.1255	H-4	.1221	.1234	.1250
6 - 40	NF	H-3	.1254	.1264	.1277	H-3	.1250	.1260	.1273	H-4	.1259	.1269	.1282	H-4	.1254	.1264	.1277
8 - 32	NC	H-4	.1480	.1493	.1509	H-3	.1476	.1489	.1505	H-5	.1486	.1499	.1515	H-4	.1481	.1494	.1510
8 - 36	NF	H-4	.1498	.1510	.1524	H-3	.1495	.1507	.1521	H-5	.1504	.1516	.1530	H-4	.1499	.1511	.1525
10 - 24	NC	H-4	.1686	.1704	.1724	H-3	.1682	.1700	.1720	H-5	.1691	.1709	.1729	H-4	.1686	.1704	.1724
10 - 32	NF	H-4	.1739	.1753	.1769	H-3	.1735	.1749	.1765	H-5	.1745	.1759	.1775	H-4	.1740	.1754	.1770
12 - 24	NC	H-4	.1945	.1963	.1984	H-3	.1941	.1959	.1980	H-5	.1951	.1969	.1990	H-4	.1945	.1963	.1984
12 - 28	NF	H-4	.1977	.1992	.2010	H-3	.1973	.1988	.2006	H-5	.1983	.1998	.2016	H-4	.1977	.1992	.2010
1/4 - 20	NC	H-5	.2242	.2263	.2288	H-4	.2237	.2258	.2283	H-6	.2248	.2269	.2294	H-5	.2242	.2263	.2288
1/4 - 28	NF	H-4	.2316	.2331	.2350	H-3	.2312	.2327	.2346	H-5	.2322	.2337	.2356	H-4	.2317	.2332	.2351
5/16 - 18	NC	H-5	.2837	.2861	.2888	H-4	.2832	.2856	.2883	H-6	.2843	.2867	.2894	H-5	.2836	.2860	.2887
5/16 - 24	NF	H-4	.2908	.2926	.2947	H-3	.2904	.2922	.2943	H-5	.2916	.2934	.2955	H-4	.2910	.2928	.2949
3/8 - 16	NC	H-6	.3425	.3452	.3483	H-4	.3419	.3446	.3477	H-7	.3431	.3458	.3489	H-5	.3424	.3451	.3482
3/8 - 24	NF	H-4	.3532	.3550	.3572	H-3	.3528	.3546	.3568	H-6	.3540	.3558	.3580	H-5	.3534	.3552	.3574
7/16 - 14	NC	H-6	.4000	.4033	.4069	H-5	.3994	.4027	.4063	H-7	.4006	.4039	.4075	H-6	.3999	.4032	.4068
7/16 - 20	NF	H-5	.4113	.4135	.4160	H-4	.4108	.4130	.4155	H-6	.4122	.4144	.4169	H-5	.4115	.4137	.4162
1/2 - 13	NC	H-6	.4598	.4631	.4670	H-5	.4590	.4623	.4662	H-8	.4604	.4637	.4676	H-6	.4596	.4629	.4668
1/2 - 20	NF	H-5	.4737	.4759	.4785	H-4	.4732	.4754	.4780	H-7	.4747	.4769	.4795	H-5	.4740	.4762	.4788
9/16 - 12	NC	H-7	.5187	.5224	.5267	H-5	.5179	.5216	.5259	H-8	.5193	.5230	.5273	H-6	.5184	.5221	.5264
9/16 - 18	NF	H-5	.5333	.5358	.5386	H-4	.5328	.5353	.5381	H-7	.5342	.5367	.5395	H-5	.5335	.5360	.5388
5/8 - 11	NC	H-7	.5773	.5812	.5859	H-5	.5765	.5804	.5851	H-8	.5780	.5819	.5866	H-6	.5771	.5810	.5857
5/8 - 18	NF	H-5	.5958	.5982	.6011	H-4	.5953	.5977	.6006	H-7	.5968	.5992	.6021	H-6	.5960	.5984	.6013
3/4 - 10	NC	H-7	.6973	.7017	.7068	H-6	.6963	.7007	.7058	H-9	.6979	.7023	.7074	H-7	.6969	.7013	.7064
3/4 - 16	NF	H-6	.7171	.7198	.7231	H-4	.7165	.7192	.7225	H-8	.7181	.7208	.7241	H-6	.7173	.7200	.7233
14mm	1.25mm	H-5	.5253	.5275	.5301	H-4	.5248	.5270	.5296	H6	.5262	.5284	.5310	H-5	.5255	.5277	.5303

THREAD FORMING TAPS MACHINE SCREW SIZES

LIST 16B

**Plug
Bottom**

Stocked with Nitride Surface Treatment



TAP SIZE	SERIES DESIGN.	STYLE	EDP NUMBER									
			H-2	H-3	H-4	H-5	H-6	H-7	H-8	H-9	H-10	
0 - 80	NF	PLUG	58022	58032	58042	58052	58062	58072				
0 - 80	NF	BOTT	58023	58033	58043	58053	58063	58073				
1 - 64	NC	PLUG	58122	58132	58142	58152	58162	58172				
1 - 64	NC	BOTT	58123	58133	58143	58153	58163	58173				
1 - 72	NF	PLUG	58222	58232	58242	58252	58262	58272				
1 - 72	NF	BOTT	58223	58233	58243	58253	58263	58273				
2 - 56	NC	PLUG	58322	58332	58342	58352	58362	58372				
2 - 56	NC	BOTT	58323	58333	58343	58353	58363	58373				
2 - 64	NF	PLUG	58422	58432	58442	58452	58462	58472				
2 - 64	NF	BOTT	58423	58433	58443	58453	58463	58473				
3 - 48	NC	PLUG	58522	58532	58542	58552	58562	58572				
3 - 48	NC	BOTT	58523	58533	58543	58553	58563	58573				
3 - 56	NF	PLUG	58622	58632	58642	58652	58662	58672				
3 - 56	NF	BOTT	58623	58633	58643	58653	58663	58673				
4 - 40	NC	PLUG	58722	58732	58742	58752	58762	58772				
4 - 40	NC	BOTT	58723	58733	58743	58753	58763	58773				
4 - 48	NF	PLUG	58822	58832	58842	58852	58862	58872				
4 - 48	NF	BOTT	58823	58833	58843	58853	58863	58873				
5 - 40	NC	PLUG	58922	58932	58942	58952	58962	58972				
5 - 40	NC	BOTT	58923	58933	58943	58953	58963	58973				
5 - 44	NF	PLUG	59022	59032	59042	59052	59062	59072				
5 - 44	NF	BOTT	59023	59033	59043	59053	59063	59073				
6 - 32	NC	PLUG	59122	59132	59142	59152	59162	59172	59182	59192	59194	
6 - 32	NC	BOTT	59123	59133	59143	59153	59163	59173	59183	59193	59195	
6 - 40	NF	PLUG	59222	59232	59242	59252	59262	59272	59282	59292	59294	
6 - 40	NF	BOTT	59223	59233	59243	59253	59263	59273	59283	59293	59295	
8 - 32	NC	PLUG	59322	59332	59342	59352	59362	59372	59382	59392	59394	
8 - 32	NC	BOTT	59323	59333	59343	59353	59363	59373	59383	59393	59395	
8 - 36	NF	PLUG	59422	59432	59442	59452	59462	59472	59482	59492	59494	
8 - 36	NF	BOTT	59423	59433	59443	59453	59463	59473	59483	59493	59495	
10 - 24	NC	PLUG	59522	59532	59542	59552	59562	59572	59582	59592	59594	
10 - 24	NC	BOTT	59523	59533	59543	59553	59563	59573	59583	59593	59595	
10 - 32	NF	PLUG	59622	59632	59642	59652	59662	59672	59682	59692	59694	
10 - 32	NF	BOTT	59623	59633	59643	59653	59663	59673	59683	59693	59695	
12 - 24	NC	PLUG	59722	59732	59742	59752	59762	59772	59782	59792	59794	
12 - 24	NC	BOTT	59723	59733	59743	59753	59763	59773	59783	59793	59795	
12 - 28	NF	PLUG	59822	59832	59842	59852	59862	59872	59882	59892	59894	
12 - 28	NF	BOTT	59823	59833	59843	59853	59863	59873	59883	59893	59895	

NOTE: No.'s 0-1-2-3-4-5 standard with no lube groove. No. 6 machine screw size taps and larger are furnished standard with a single vent groove. Vent grooves on No. 2 through No. 5 size taps and/or any additional vent grooves on larger taps, will be furnished for an added charge of 5% per groove up to a maximum charge of 15%.

NOTE: 48 pitch and finer offered with standard two thread chamfer only. Bottoming style with points removed, plug style with points left on.

THREAD FORMING TAPS FRACTIONAL SIZES

LIST 16B

Plug Bottom

Stocked with Nitride Surface Treatment



TAP SIZE	SERIES DES.	STYLE	EDP NUMBER									
			H-2	H-3	H-4	H-5	H-6	H-7	H-8	H-9	H-10	
1/4 - 20	NC	PLUG	59922	59932	59942	59952	59962	59972	59982	59992	59994	
1/4 - 20	NC	BOTT	59923	59933	59943	59953	59963	59973	59983	59993	59995	
1/4 - 28	NF	PLUG	60022	60032	60042	60052	60062	60072	60082	60092	60094	
1/4 - 28	NF	BOTT	60023	60033	60043	60053	60063	60073	60083	60093	60095	
5/16 - 18	NC	PLUG	60122	60132	60142	60152	60162	60172	60182	60192	60194	
5/16 - 18	NC	BOTT	60123	60133	60143	60153	60163	60173	60183	60193	60195	
5/16 - 24	NF	PLUG	60222	60232	60242	60252	60262	60272	60282	60292	60294	
5/16 - 24	NF	BOTT	60223	60233	60243	60253	60263	60273	60283	60293	60295	
			H-4	H-5	H-6	H-7	H-8	H-9	H-10	H-11	H-12	
3/8 - 16	NC	PLUG	60442	60452	60462	60472	60482	60492	60494	60496	60498	
3/8 - 16	NC	BOTT	60443	60453	60463	60473	60483	60493	60495	60497	60499	
3/8 - 24	NF	PLUG	60642	60652	60662	60672	60682	60692	60694	60696	60698	
3/8 - 24	NF	BOTT	60643	60653	60663	60673	60683	60693	60695	60697	60699	
7/16 - 14	NC	PLUG	60842	60852	60862	60872	60882	60892	60894	60896	60898	
7/16 - 14	NC	BOTT	60843	60853	60863	60873	60883	60893	60895	60897	60899	
7/16 - 20	NF	PLUG	61042	61052	61062	61072	61082	61092	61094	61096	61098	
7/16 - 20	NF	BOTT	61043	61053	61063	61073	61083	61093	61095	61097	61099	
1/2 - 13	NC	PLUG	61242	61252	61262	61272	61282	61292	61294	61296	61298	
1/2 - 13	NC	BOTT	61243	61253	61263	61273	61283	61293	61295	61297	61299	
1/2 - 20	NF	PLUG	61442	61452	61462	61472	61482	61492	61494	61496	61498	
1/2 - 20	NF	BOTT	61443	61453	61463	61473	61483	61493	61495	61497	61499	
9/16 - 12	NC	PLUG	61642	61652	61662	61672	61682	61692	61694	61696	61698	
9/16 - 12	NC	BOTT	61643	61653	61663	61673	61683	61693	61695	61697	61699	
9/16 - 18	NF	PLUG	61842	61852	61862	61872	61882	61892	61894	61896	61898	
9/16 - 18	NF	BOTT	61843	61853	61863	61873	61883	61893	61895	61897	61899	
5/8 - 11	NC	PLUG	62042	62052	62062	62072	62082	62092	62094	62096	62098	
5/8 - 11	NC	BOTT	62043	62053	62063	62073	62083	62093	62095	62097	62099	
5/8 - 18	NF	PLUG	62242	62252	62262	62272	62282	62292	62294	62296	62298	
5/8 - 18	NF	BOTT	62243	62253	62263	62273	62283	62293	62295	62297	62299	
3/4 - 10	NC	PLUG			62412	62422	62432	62442	62452		62472	
3/4 - 10	NC	BOTT			62413	62423	62433	62443	62453		62473	
3/4 - 16	NF	PLUG			62512	62522	62532	62542	62552		62572	
3/4 - 16	NF	BOTT			62513	62523	62533	62543	62553		62573	

NOTE: No.'s 0-1-2-3-4-5 standard with no lube groove. No. 6 machine screw size taps and larger are furnished standard with a single vent groove. Vent grooves on No. 2 through No. 5 size taps and/or any additional vent grooves on larger taps, will be furnished for an added charge of 5% per groove up to a maximum charge of 15%.

NOTE: 48 pitch and finer offered with standard two thread chamfer only. Bottoming style with points removed, plug style with points left on.

METRIC THREAD FORMING TAPS

LIST 16M

Plug
Bottom

Stocked with Nitride Surface Treatment



TAP SIZE	PITCH DIAMETER LIMIT		16M	
	CLASS 6H FIT	CLASS 4H FIT	PLUG EDP NUMBER	BOTTOM EDP NUMBER
M2X0.4	D5		62611	62612
M2X0.4		D3	62613	62614
M2.5X0.45	D6		62617	62618
M2.5X0.45		D3	62619	62620
M3X0.5	D6		62621	62622
M3X0.5		D3	62623	62624
M3.5X0.6	D7		62627	62628
M3.5X0.6		D4	62629	62630
M4X0.7	D7		62631	62632
M4X0.7		D4	62633	62634
M5X0.8	D8		62637	62638
M5X0.8		D4	62639	62640
M6X1.0	D9		62641	62642
M6X1.0		D5	62643	62644
M8X1.25	D10		62647	62648
M8X1.25		D5	62649	62650
M10X1.5	D11		62651	62652
M10X1.5		D6	62653	62654

METRIC THREAD FORMERS TOLERANCES & HOLE SIZES

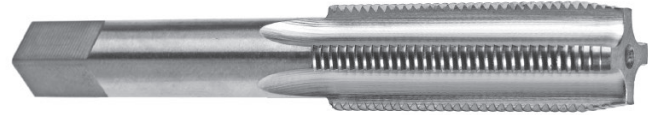
TAP SIZE	PITCH DIAMETER LIMIT	PROBABLE DRILL SIZE	TAP SIZE	PITCH DIAMETER LIMIT	PROBABLE DRILL SIZE
	CLASS 6H FIT			CLASS 4H FIT	
M2X0.4	D5	1.85mm	M2X0.4	D3	1.80mm
M2.5X0.45	D6	2.35mm	M2.5X0.45	D3	2.30mm
M3X0.5	D6	2.80mm	M3X0.5	D3	2.75mm
M3.5X0.6	D7	3.25mm	M3.5X0.6	D4	3.20mm
M4X0.7	D7	3.70mm	M4X0.7	D4	#27
M5X0.8	D8	4.70mm	M5X0.8	D4	4.60mm
M6X1.0	D9	5.50mm	M6X1.0	D5	5.50mm
M8X1.25	D10	7.40mm	M8X1.25	D5	7.30mm
M10X1.5	D11	9.25mm	M10X1.5	D6	9.20mm

To convert millimeters to inches, multiply by .03937

METRIC SPARK PLUG TAPS

LIST 121

Taper
Plug
Bottom



TAP SIZE	NO. OF FLUTES	H LIMIT	121			
			TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	SET EDP NUMBER
M14X1.25	4	H-3	35031	35032	35033	35030
M18X1.5	4	H-3	35131	35132	35133	35130

METRIC HAND TAPS

LIST 100M
CLASS 6H FIT

Taper
Plug
Bottom



TAP SIZE	PITCH DIAMETER LIMIT	NO. OF FLUTES	100M			
			TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	SET EDP NUMBER
M1.6X0.35	D3	2	62702	62700	62701	62703
M1.8X0.35	D2	2	62706	62704	62705	62707
M2X0.4	D3	3	62710	62708	62709	62717
M2.2X0.45	D2	3	62711	62712	62713	62724
M2.5X0.45	D3	3	62716	62714	62715	62728
M3X0.5	D3	3	62720	62718	62719	62732
M3.5X0.6	D4	3	62721	62722	62723	62736
M4X0.7	D4	4	62725	62726	62727	62740
M4.5X0.75	D4	4	62729	62730	62731	62744
M5X0.8	D4	4	62733	62734	62735	62748
M6X1.0	D5	4	62737	62738	62739	62752
M6.3X1.0	D5	4	62741	62742	62743	62756
M7X1.0	D5	4	62745	62746	62747	62760
M8X1.25	D5	4	62749	62750	62751	62764
M10X1.5	D6	4	62753	62754	62755	62768
M12X1.75	D6	4	62757	62758	62759	62769
M14X2.0	D7	4	62761	62762	62763	62794
M16X2.0	D7	4	62765	62766	62767	62795
M18X2.5	D7	4	62772	62770	62771	62796
M20X2.5	D7	4	62773	62774	62775	62797
M22X2.5	D6	4	62776	62777	62778	62798
M24X3.0	D8	4	62779	62780	62781	62799
M27X3.0	D9	4	62782	62783	62784	62801
M30X3.5	D9	4	62785	62786	62787	62802
M33X3.5	D9	4	62788	62789	62790	62803
M36X4.0	D9	4	62791	62792	62793	62805

METRIC POPULAR SPECIAL HAND TAPS

LIST 100MOS

Taper
Plug
Bottom



STYLE 1 - M1.5 THROUGH M5

STYLE 2 - M6 THROUGH M10

STYLE 3 - M12 THROUGH M39

TAP SIZE	PITCH DIA. LIMIT	NO. OF FLUTES	TAP BLANK SIZE	100MOS		
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER
M1.5X0.35	D1	2	#0	81001	81002	81003
M1.5X0.35	D2	2	#0	81007	81008	81009
M1.6X0.35	D1	2	#0	81011	81012	81013
M1.6X0.35	D2	2	#0	81017	81018	81019
M1.8X0.35	D1	2	#1	81027	81028	81029
M2X0.45	D1	3	#2	81051	81052	81053
M2X0.45	D2	3	#2	81057	81058	81059
M2X0.4	D1	3	#2	81037	81038	81039
M2X0.4	D2	3	#2	81041	81042	81043
M2.2X0.45	D1	3	#2	81061	81062	81063
M2.3X0.4	D1	2	#3	81071	81072	81073
M2.3X0.4	D2	2	#3	81077	81078	81079
M2.5X0.45	D1	3	#3	81081	81082	81083
M2.5X0.45	D2	3	#3	81087	81088	81089
M2.6X0.45	D1	3	#3	81097	81098	81099
M2.6X0.45	D2	3	#3	81101	81102	81103
M3X0.6	D1	3	#5	81121	81122	81123
M3X0.6	D2	3	#5	81127	81128	81129
M3X0.5	D1	3	#5	81107	81108	81109
M3X0.5	D2	3	#5	81111	81112	81113
M3.5X0.6	D1	3	#6	81131	81132	81133
M3.5X0.6	D2	3	#6	81137	81138	81139
M4X0.75	D2	4	#8	81161	81162	81163
M4X0.75	D3	4	#8	81167	81168	81169
M4X0.7	D2	4	#8	81147	81148	81149
M4X0.7	D3	4	#8	81151	81152	81153
M4.5X0.75	D2	4	#10	81171	81172	81173
M4.5X0.75	D3	4	#10	81177	81178	81179
M5X1.0	D2	4	#10	81211	81212	81213
M5X1.0	D3	4	#10	81217	81218	81219
M5X0.9	D2	4	#10	81201	81202	81203
M5X0.9	D3	4	#10	81207	81208	81209
M5X0.8	D2	4	#10	81187	81188	81189
M5X0.8	D3	4	#10	81191	81192	81193
M5.5X0.9	D2	4	#12	81221	81222	81223
M5.5X0.9	D3	4	#12	81227	81228	81229

See page 89 for Tap Dimensions.

METRIC POPULAR SPECIAL HAND TAPS (CONTINUED)

LIST 100MOS

Taper
 Plug
 Bottom



STYLE 1 - M1.5 THROUGH M5

STYLE 2 - M6 THROUGH M10

STYLE 3 - M12 THROUGH M39

TAP SIZE	PITCH DIA. LIMIT	NO. OF FLUTES	TAP BLANK SIZE	100MOS		
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER
M6X1.0	D3	4	1/4"	81241	81242	81243
M6X0.75	D2	4	1/4"	81231	81232	81233
M6X0.75	D3	4	1/4"	81237	81238	81239
M7X1.0	D3	4	5/16"	81261	81262	81263
M7X0.75	D2	4	5/16"	81251	81252	81253
M7X0.75	D4	4	5/16"	81257	81258	81259
M8X1.25	D3	4	5/16"	81281	81282	81283
M8X1.0	D3	4	5/16"	81271	81272	81273
M8X1.0	D5	4	5/16"	81277	81278	81279
M9X1.25	D3	4	3/8"	81301	81302	81303
M9X1.25	D5	4	3/8"	81307	81308	81309
M9X1.0	D3	4	3/8"	81291	81292	81293
M9X1.0	D5	4	3/8"	81297	81298	81299
M10X1.5	D3	4	3/8"	81331	81332	81333
M10X1.5	D5	4	3/8"	81337	81338	81339
M10X1.25	D3	4	3/8"	81321	81322	81323
M10X1.25	D5	4	3/8"	81327	81328	81329
M10X1.0	D3	4	3/8"	81311	81312	81313
M10X1.0	D5	4	3/8"	81317	81318	81319
M11X1.5	D3	4	7/16"	81344	81345	81346
M11X1.5	D5	4	7/16"	81347	81348	81349
M12X1.75	D3	4	1/2"	81371	81372	81373
M12X1.75	D5	4	1/2"	81377	81378	81379
M12X1.5	D3	4	1/2"	81361	81362	81363
M12X1.5	D5	4	1/2"	81367	81368	81369
M12X1.25	D3	4	1/2"	81351	81352	81353
M12X1.25	D5	4	1/2"	81357	81358	81359
M14X2.0	D3	4	9/16"	81407	81408	81409
M14X2.0	D5	4	9/16"	81411	81412	81413
M14X1.5	D3	4	9/16"	81397	81398	81399
M14X1.5	D5	4	9/16"	81401	81402	81403
M14X1.25	D5	4	9/16"	81391	81392	81393
M15X1.5	D3	4	5/8"	81421	81422	81423
M15X1.5	D5	4	5/8"	81427	81428	81429

See page 89 for Tap Dimensions.

METRIC POPULAR SPECIAL HAND TAPS (CONTINUED)

LIST 100MOS

Taper
Plug
Bottom



STYLE 1 - M1.5 THROUGH M5

STYLE 2 - M6 THROUGH M10

STYLE 3 - M12 THROUGH M39

TAP SIZE	PITCH DIA. LIMIT	NO. OF FLUTES	TAP BLANK SIZE	100MOS		
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER
M16X2.0	D4	4	5/8"	81441	81442	81443
M16X2.0	D6	4	5/8"	81447	81448	81449
M16X1.5	D3	4	5/8"	81431	81432	81433
M16X1.5	D5	4	5/8"	81437	81438	81439
M17X1.5	D3	4	11/16"	81547	81548	81549
M17X1.5	D5	4	11/16"	81551	81552	81553
M18X2.5	D4	4	11/16"	81577	81578	81579
M18X2.5	D6	4	11/16"	81581	81582	81583
M18X2.0	D4	4	11/16"	81567	81568	81569
M18X2.0	D6	4	11/16"	81571	81572	81573
M18X1.5	D5	4	11/16"	81561	81562	81563
M19X2.5	D4	4	3/4"	81591	81592	81593
M19X2.5	D6	4	3/4"	81597	81598	81599
M20X2.5	D4	4	13/16"	81621	81622	81623
M20X2.5	D6	4	13/16"	81627	81628	81629
M20X2.0	D4	4	13/16"	81611	81612	81613
M20X2.0	D6	4	13/16"	81617	81618	81619
M20X1.5	D3	4	13/16"	81601	81602	81603
M20X1.5	D5	4	13/16"	81607	81608	81609
M22X2.5	D4	4	7/8"	81657	81658	81659
M22X2.0	D4	4	7/8"	81647	81648	81649
M22X2.0	D6	4	7/8"	81651	81652	81653
M22X1.5	D3	4	7/8"	81637	81638	81639
M22X1.5	D5	4	7/8"	81641	81642	81643
M24X3.0	D4	4	15/16"	81687	81688	81689
M24X2.0	D4	4	15/16"	81677	81678	81679
M24X2.0	D8	4	15/16"	81681	81682	81683
M24X1.5	D3	4	15/16"	81667	81668	81669
M24X1.5	D5	4	15/16"	81671	81672	81673
M25X2.0	D4	4	1"	81707	81708	81709
M25X2.0	D8	4	1"	81711	81712	81713
M25X1.5	D3	4	1"	81697	81698	81699
M25X1.5	D5	4	1"	81701	81702	81703
M26X3.0	D5	4	1-1/16"	81717	81718	81719
M26X3.0	D9	4	1-1/16"	81721	81722	81723
M27X3.0	D5	4	1-1/16"	81737	81738	81739

METRIC POPULAR SPECIAL HAND TAPS (CONTINUED)

LIST 100MOS

Taper
 Plug
 Bottom



STYLE 1 - M1.5 THROUGH M5

STYLE 2 - M6 THROUGH M10

STYLE 3 - M12 THROUGH M39

TAP SIZE	PITCH DIA. LIMIT	NO. OF FLUTES	TAP BLANK SIZE	100MOS		
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER
M27X2.0	D5	4	1-1/16"	81727	81728	81729
M27X2.0	D7	4	1-1/16"	81731	81732	81733
M28X3.0	D5	4	1-1/8"	81757	81758	81759
M28X3.0	D9	4	1-1/8"	81761	81762	81763
M28X2.0	D5	4	1-1/8"	81747	81748	81749
M28X2.0	D7	4	1-1/8"	81751	81752	81753
M30X3.5	D5	4	1-3/16"	81787	81788	81789
M30X3.0	D5	4	1-3/16"	81777	81778	81779
M30X3.0	D9	4	1-3/16"	81781	81782	81783
M30X2.0	D5	4	1-3/16"	81767	81768	81769
M30X2.0	D7	4	1-3/16"	81771	81772	81773
M32X3.5	D5	4	1-1/4"	81807	81808	81809
M32X3.5	D9	4	1-1/4"	81811	81812	81813
M32X2.0	D5	6	1-1/4"	81797	81798	81799
M32X2.0	D7	6	1-1/4"	81801	81802	81803
M33X3.5	D5	4	1-5/16"	81837	81838	81839
M33X3.0	D5	4	1-5/16"	81827	81828	81829
M33X3.0	D9	4	1-5/16"	81831	81832	81833
M33X2.0	D5	4	1-5/16"	81817	81818	81819
M33X2.0	D9	4	1-5/16"	81821	81822	81823
M34X3.5	D5	4	1-3/8"	81847	81848	81849
M34X3.5	D9	4	1-3/8"	81851	81852	81853
M36X4.0	D5	4	1-7/16"	81877	81878	81879
M36X3.0	D5	4	1-7/16"	81867	81868	81869
M36X3.0	D9	4	1-7/16"	81871	81872	81873
M36X2.0	D5	4	1-7/16"	81857	81858	81859
M36X2.0	D7	4	1-7/16"	81861	81862	81863
M38X4.0	D5	4	1-1/2"	81887	81888	81889
M38X4.0	D9	4	1-1/2"	81891	81892	81893
M39X4.0	D6	6	1-5/8"	81917	81918	81919
M39X4.0	D10	6	1-5/8"	81921	81922	81923
M39X3.0	D6	6	1-5/8"	81901	81902	81903
M39X3.0	D8	6	1-5/8"	81907	81908	81909
M39X3.0	D9	6	1-5/8"	81911	81912	81913
M39X2.0	D6	6	1-5/8"	81897	81898	81899

See page 89 for Tap Dimensions.

METRIC POPULAR SPECIAL SPIRAL POINT TAPS

LIST 102MOS

Spiral Point Plug



STYLE 1 - M1.5 THROUGH M5		STYLE 2 - M6 THROUGH M10			STYLE 3 - M12 THROUGH M16	
TAP SIZE	PITCH DIA. LIMIT	NO. OF FLUTES	TAP BLANK SIZE	102MOS		
				SPPT PLUG EDP NUMBER		
M2X0.45	D1	2	#2	82052		
M2X0.45	D2	2	#2	82058		
M2X0.4	D1	2	#2	82038		
M2X0.4	D2	2	#2	82042		
M2.2X0.45	D1	2	#2	82062		
M2.3X0.4	D1	2	#3	82072		
M2.3X0.4	D2	2	#3	82078		
M2.5X0.45	D1	2	#3	82082		
M2.5X0.45	D2	2	#3	82088		
M2.6X0.45	D1	2	#3	82098		
M2.6X0.45	D2	2	#3	82102		
M3X0.6	D1	2	#5	82122		
M3X0.6	D2	2	#5	82128		
M3X0.5	D1	2	#5	82108		
M3X0.5	D2	2	#5	82112		
M3.5X0.6	D1	2	#6	82132		
M3.5X0.6	D2	2	#6	82138		
M4X0.75	D2	2	#8	82162		
M4X0.75	D3	2	#8	82168		
M4X0.7	D2	2	#8	82148		
M4X0.7	D3	2	#8	82152		
M4.5X0.75	D2	2	#10	82172		
M4.5X0.75	D3	2	#10	82178		
M5X1.0	D2	2	#10	82212		
M5X1.0	D3	2	#10	82218		
M5X0.9	D2	2	#10	82202		
M5X0.9	D3	2	#10	82208		
M5X0.8	D2	2	#10	82192		
M5X0.8	D3	2	#10	82194		
M5.5X0.9	D2	2	#12	82222		
M5.5X0.9	D3	2	#12	82228		
M6X1.0	D3	2	1/4"	82242		
M6X0.75	D2	2	1/4"	82232		
M6X0.75	D3	2	1/4"	82238		
M7X1.0	D3	2	5/16"	82262		
M7X0.75	D2	2	5/16"	82252		

METRIC POPULAR SPECIAL SPIRAL POINT TAPS (CONTINUED)

LIST 102MOS

Spiral Point Plug



STYLE 1 - M1.5 THROUGH M5		STYLE 2 - M6 THROUGH M10			STYLE 3 - M12 THROUGH M16
TAP SIZE	PITCH DIA. LIMIT	NO. OF FLUTES	TAP BLANK SIZE	102MOS	
				SPPT PLUG EDP NUMBER	
M7X0.75	D4	2	5/16"	82258	
M8X1.25	D3	2	5/16"	82282	
M8X1.0	D3	2	5/16"	82272	
M8X1.0	D5	2	5/16"	82278	
M9X1.25	D3	3	3/8"	82302	
M9X1.25	D5	3	3/8"	82308	
M9X1.0	D3	3	3/8"	82292	
M9X1.0	D5	3	3/8"	82298	
M10X1.5	D3	3	3/8"	82332	
M10X1.5	D5	3	3/8"	82338	
M10X1.25	D3	3	3/8"	82322	
M10X1.25	D5	3	3/8"	82328	
M10X1.0	D3	3	3/8"	82312	
M10X1.0	D5	3	3/8"	82318	
M11X1.5	D3	3	7/16"	82348	
M11X1.5	D5	3	7/16"	82352	
M12X1.75	D3	3	1/2"	82378	
M12X1.75	D5	3	1/2"	82382	
M12X1.5	D3	3	1/2"	82368	
M12X1.5	D5	3	1/2"	82372	
M12X1.25	D3	3	1/2"	82358	
M12X1.25	D5	3	1/2"	82362	
M14X2.0	D3	3	9/16"	82412	
M14X2.0	D5	3	9/16"	82419	
M14X1.5	D3	3	9/16"	82402	
M14X1.5	D5	3	9/16"	82408	
M14X1.25	D5	3	9/16"	82398	
M15X1.5	D3	3	5/8"	82428	
M15X1.5	D5	3	5/8"	82432	
M16X2.0	D4	3	5/8"	82448	
M16X2.0	D6	3	5/8"	82452	
M16X1.5	D3	3	5/8"	8243	
M16X1.5	D5	3	5/8"	82442	

See page 89 for Tap Dimensions.

METRIC SPIRAL POINT PLUG STYLE TAPS

LIST 102M
CLASS 6H FIT

Spiral Point Plug



TAP SIZE	PITCH DIAMETER LIMIT	NO. OF FLUTES	102M
			SPPT PLUG EDP NUMBER
M1.6X0.35	D3	2	62800
M1.8X0.35	D2	2	62804
M2X0.4	D3	2	62808
M2.2X0.45	D2	2	62812
M2.5X0.45	D3	2	62814
M3X0.5	D3	2	62818
M3.5X0.6	D4	2	62822
M4X0.7	D4	2	62826
M4.5X0.75	D4	2	62830
M5X0.8	D4	2	62834
M6X1.0	D5	2	62838
M6.3X1.0	D5	2	62842
M7X1.0	D5	2	62846
M8X1.25	D5	2	62850
M10X1.5	D6	3	62854
M12X1.75	D6	3	62858
M14X2.0	D7	3	62862
M16X2.0	D7	3	62866
M18X2.5	D7	3	62870
M20X2.5	D7	3	62874

METRIC 52° FAST SPIRAL FLUTED HAND TAPS

LIST 100F
CLASS 6H FIT

Plug
Bottom

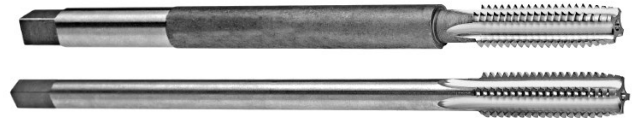


TAP SIZE	PITCH DIAMETER LIMIT	NO. OF FLUTES	100F	
			PLUG EDP NUMBER	BOTTOM EDP NUMBER
M3X0.5	D3	2	62900	62901
M3.5X0.6	D4	3	62910	62911
M4X0.7	D4	3	62920	62921
M5X0.8	D4	3	62930	62931
M6X1.0	D5	3	62940	62941
M8X1.25	D5	3	62950	62951
M10X1.5	D6	3	62960	62961
M12X1.75	D6	4	62970	62971

METRIC 6" O/A PULLEY AND SMALL SHANK EXTENSION TAPS

LIST 112M
CLASS 6H FIT

Plug

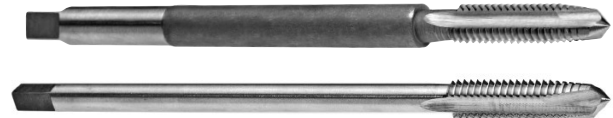


TAP SIZE	PITCH DIAMETER LIMIT	NO. OF FLUTES	SHANK DIAMETER	112M
				PLUG EDP NUMBER
M4X0.7	D4	4	.168	45800
M4X0.7	D4	4	.123	45804
M5X0.8	D4	4	.194	45808
M5X0.8	D4	4	.136	45813
M6X1.0	D5	4	.255	45816
M6X1.0	D5	4	.185	45821
M8X1.25	D5	4	.318	45825
M8X1.25	D5	4	.240	45829
M10X1.5	D6	4	.381	45833
M10X1.5	D6	4	.275	45837
M12X1.75	D6	4	.507	45843
M12X1.75	D6	4	.367	45845
M14X2.0	D7	4	.570	45849
M14X2.0	D7	4	.429	45853
M16X2.0	D7	4	.633	45857
M16X2.0	D7	4	.480	45861

METRIC 6" O/A SPPT PULLEY AND SMALL SHANK EXTENSION TAPS

LIST 113M
CLASS 6H FIT

Spiral Point Plug



TAP SIZE	PITCH DIAMETER LIMIT	NO. OF FLUTES	SHANK DIAMETER	113M
				SPPT PLUG EDP NUMBER
M4X0.7	D4	2	.168	45900
M4X0.7	D4	2	.123	45904
M5X0.8	D4	2	.194	45908
M5X0.8	D4	2	.136	45912
M6X1.0	D5	2	.255	45916
M6X1.0	D5	2	.185	45921
M8X1.25	D5	2	.318	45925
M8X1.25	D5	2	.240	45928
M10X1.5	D6	3	.381	45933
M10X1.5	D6	3	.275	45937
M12X1.75	D6	3	.507	45941
M12X1.75	D6	3	.367	45945
M14X2.0	D7	3	.570	45949
M14X2.0	D7	3	.429	45953
M16X2.0	D7	3	.633	45957
M16X2.0	D7	3	.480	45961

*For larger quantity prices, consult factory.

METRIC +.005 OVERSIZE HAND AND SPIRAL POINT TAPS

LIST 110M

Plug
Bottom
Spiral Point Plug



TAP SIZE	NO. OF FLUTES	H LIMIT (+ .005)	110M		
			PLUG EDP NUMBER	BOTTOM EDP NUMBER	SPPT PLUG EDP NUMBER
M3X0.5	3	H-11	65002	65003	
M3X0.5	2	H-11			65102
M3.5X0.6	3	H-11	65012	65013	
M3.5X0.6	2	H-11			65112
M4X0.7	4	H-11	65022	65023	
M4X0.7	2	H-11			65122
M5X0.8	4	H-11	65032	65033	
M5X0.8	2	H-11			65132
M6X1.0	4	H-11	65042	65043	
M6X1.0	2	H-11			65142
M8X1.25	4	H-11	65052	65053	
M8X1.25	2	H-11			65152
M10X1.5	4	H-11	65062	65063	
M10X1.5	3	H-11			65162
M12X1.75	4	H-11	65072	65073	
M12X1.75	3	H-11			65172

METRIC PREMIUM STEEL STRAIGHT FLUTE TAPS WITH PENTA RELIEF

LIST 403VM
CNC DESIGN
CLASS 6H FIT

Plug
Bottom
PENTA



TAP SIZE	PITCH DIAMETER LIMIT	NO. OF FLUTES	403VM	
			PLUG EDP NUMBER	BOTTOM EDP NUMBER
			M3X0.5	D3
M3.5X0.6	D4	3	86012	86013
M4X0.7	D4	3	86022	86023
M5X0.8	D4	3	86032	86033
M6X1.0	D5	3	86042	86043
M8X1.25	D5	3	86052	86053
M10X1.5	D6	3	86062	86063
M12X1.75	D6	3	86072	86073
M14X2.0	D7	3	86082	86083
M16X2.0	D7	3	86092	86093

METRIC PREMIUM STEEL SPIRAL POINT TAPS

LIST 402VM
 CNC DESIGN
 CLASS 6H FIT

Spiral Point Plug



STYLE 1 - M3 THROUGH M5		STYLE 2 - M6 THROUGH M10		STYLE 3 - M12 THROUGH M16	
TAP SIZE	PITCH DIAMETER LIMIT	NO. OF FLUTES	402VM		
			SPPT PLUG EDP NUMBER		
M3X0.5	D3	2	86202		
M3.5X0.6	D4	3	86212		
M4X0.7	D4	3	86222		
M5X0.8	D4	3	86232		
M6X1.0	D5	3	86242		
M8X1.25	D5	3	86252		
M10X1.5	D6	3	86262		
M12X1.75	D6	3	86272		
M14X2.0	D7	3	86282		
M16X2.0	D7	3	86292		

METRIC PREMIUM STEEL HEAVY DUTY SPIRAL FLUTED TAPS

LIST 406VM
 CNC DESIGN
 CLASS 6H FIT

Plug Bottom



STYLE 1 - M3 THROUGH M5		STYLE 2 - M6 THROUGH M10		STYLE 3 - M12 THROUGH M16	
TAP SIZE	PITCH DIAMETER LIMIT	NO. OF FLUTES	406VM		
			PLUG EDP NUMBER	BOTTOM EDP NUMBER	
M3X0.5	D3	2	86402	86403	
M3.5X0.6	D4	3	86412	86413	
M4X0.7	D4	3	86422	86423	
M5X0.8	D4	3	86432	86433	
M6X1.0	D5	3	86442	86443	
M8X1.25	D5	3	86452	86453	
M10X1.5	D6	3	86462	86463	
M12X1.75	D6	3	86472	86473	
M14X2.0	D7	3	86482	86483	
M16X2.0	D7	3	86492	86493	

Penta Relief – Special thread geometry that allows for freer cutting. Available in Standard Taps in List Numbers 106A in size #10 with 2 & 3 Flutes and larger sizes, 103, 102C, 402VPR, 402VMPR, 403V, 403VM, 407VPR and 407VMPR.

See page 90 for Tap Dimensions.

**HIGH
VANADIUM
PENTA
BLUE**

METRIC PREMIUM STEEL SPIRAL POINT TAPS WITH PENTA RELIEF

**LIST 402VMMPR
CNC DESIGN
CLASS 6H FIT**

Spiral Point Plug



PENTA

STYLE 1 - M3 THROUGH M5

STYLE 2 - M6 THROUGH M10

STYLE 3 - M12 THROUGH M16

TAP SIZE	PITCH DIAMETER LIMIT	NO. OF FLUTES	BRIGHT	PENTA BLUE
			SPPT PLUG EDP NUMBER	SPPT PLUG EDP NUMBER
M3X0.5	D3	2	86203	86205
M3.5X0.6	D4	3	86213	86215
M4X0.7	D4	3	86223	86225
M5X0.8	D4	3	86233	86235
M6X1.0	D5	3	86243	86245
M8X1.25	D5	3	86253	86255
M10X1.5	D6	3	86263	86265
M12X1.75	D6	3	86273	86275
M14X2.0	D7	3	86283	86285
M16X2.0	D7	3	86293	86295

**HIGH
VANADIUM
PENTA
BLUE**

METRIC PREMIUM STEEL SLOW SPIRAL FLUTED TAPS WITH PENTA RELIEF

**LIST 407VMMPR
CNC DESIGN
CLASS 6H FIT**

**Modified Bottom 3 to 3-1/2 Thread Chamfer
Bottom 1 to 2 Thread Chamfer**



PENTA

STYLE 1 - M3 THROUGH M5

STYLE 2 - M6 THROUGH M10

STYLE 3 - M12 THROUGH M16

TAP SIZE	PITCH DIA. LIMIT	NO. OF FLUTES	BRIGHT		PENTA BLUE	
			MOD. BOTT EDP NUMBER	BOTTOM EDP NUMBER	MOD. BOTT EDP NUMBER	BOTTOM EDP NUMBER
M3X0.5	D3	2	86602	86603	86604	86605
M3.5X0.6	D4	3	86612	86613	86614	86615
M4X0.7	D4	3	86622	86623	86624	86625
M5X0.8	D4	3	86632	86633	86634	86635
M6X1.0	D5	3	86642	86643	86644	86645
M8X1.25	D5	3	86652	86653	86654	86655
M10X1.5	D6	3	86662	86663	86664	86665
M12X1.75	D6	3	86672	86673	86674	86675
M14X2.0	D7	3	86682	86683	86684	86685
M16X2.0	D7	3	86692	86693	86694	86695

Modified Bottom Taps have points on the thread end for sizes up to and including M10 & 3/8". Please specify when ordering if the points are to be removed.

See page 90 for Tap Dimensions.

PREMIUM STEEL STRAIGHT FLUTE TAPS WITH PENTA RELIEF

LIST 403V
CNC DESIGN

**Plug
Bottom**

PENTA



STYLE 1 - #4 THROUGH #10

STYLE 2 - 1/4 THROUGH 3/8

STYLE 3 - 7/16 THROUGH 3/4

TAP SIZE	SERIES DESIGN.	H LIMIT	NO. OF FLUTES	403V	
				PLUG EDP NUMBER	BOTTOM EDP NUMBER
4 - 40	NC	H-2	3	84402	84403
5 - 40	NC	H-2	3	84405	84406
6 - 32	NC	H-3	3	84412	84413
8 - 32	NC	H-3	3	84422	84423
10 - 24	NC	H-3	3	84432	84433
10 - 32	NF	H-3	3	84442	84443
1/4 - 20	NC	H-3	3	84452	84453
1/4 - 20	NC	H-5	3	84462	84463
1/4 - 28	NF	H-3	3	84472	84473
5/16 - 18	NC	H-3	3	84482	84483
5/16 - 18	NC	H-5	3	84492	84493
5/16 - 24	NF	H-3	3	84502	84503
3/8 - 16	NC	H-3	3	84512	84513
3/8 - 16	NC	H-5	3	84522	84523
3/8 - 24	NF	H-3	3	84532	84533
7/16 - 14	NC	H-3	3	84542	84543
7/16 - 14	NC	H-5	3	84552	84553
7/16 - 20	NF	H-3	3	84562	84563
1/2 - 13	NC	H-3	3	84572	84573
1/2 - 13	NC	H-5	3	84582	84583
1/2 - 20	NF	H-3	3	84592	84593
9/16 - 12	NC	H-3	3	84602	84603
9/16 - 12	NC	H-5	3	84612	84613
9/16 - 18	NF	H-3	3	84622	84623
5/8 - 11	NC	H-3	3	84632	84633
5/8 - 11	NC	H-5	3	84642	84643
5/8 - 18	NF	H-3	3	84652	84653
3/4 - 10	NC	H-3	3	84662	84663
3/4 - 10	NC	H-5	3	84672	84673
3/4 - 16	NF	H-3	3	84682	84683

Penta Relief – Special thread geometry that allows for freer cutting. Available in Standard Taps in List Numbers 106A in size #10 with 2 & 3 Flutes and larger sizes, 103, 102C, 402VPR, 402VMPP, 403V, 403VM, 407VPR and 407VMPP.

Penta Blue – Combination of special PENTA Relief and Blue Diamond Surface Treatment.

PREMIUM STEEL SPIRAL POINT TAPS

LIST 402V
CNC DESIGN

Spiral Point Plug



STYLE 1 - #4 THROUGH #10

STYLE 2 - 1/4 THROUGH 3/8

STYLE 3 - 7/16 THROUGH 3/4

TAP SIZE	SERIES DESIGN.	H LIMIT	NO. OF FLUTES	402V
				SPPT PLUG EDP NUMBER
4 - 40	NC	H-2	2	84800
5 - 40	NC	H-2	2	84799
6 - 32	NC	H-3	3	84801
8 - 32	NC	H-3	3	84803
10 - 24	NC	H-3	3	84805
10 - 32	NF	H-3	3	84807
1/4 - 20	NC	H-3	3	84809
1/4 - 20	NC	H-5	3	84812
1/4 - 28	NF	H-3	3	84814
5/16 - 18	NC	H-3	3	84816
5/16 - 18	NC	H-5	3	84818
5/16 - 24	NF	H-3	3	84821
3/8 - 16	NC	H-3	3	84823
3/8 - 16	NC	H-5	3	84825
3/8 - 24	NF	H-3	3	84827
7/16 - 14	NC	H-3	3	84829
7/16 - 14	NC	H-5	3	84832
7/16 - 20	NF	H-3	3	84834
1/2 - 13	NC	H-3	3	84836
1/2 - 13	NC	H-5	3	84838
1/2 - 20	NF	H-3	3	84841
9/16 - 12	NC	H-3	3	84843
9/16 - 12	NC	H-5	3	84845
9/16 - 18	NF	H-3	3	84847
5/8 - 11	NC	H-3	3	84849
5/8 - 11	NC	H-5	3	84852
5/8 - 18	NF	H-3	3	84854
3/4 - 10	NC	H-3	3	84856
3/4 - 10	NC	H-5	3	84858
3/4 - 16	NF	H-3	3	84861

See page 90 for Tap Dimensions.

PREMIUM STEEL HEAVY DUTY SPIRAL FLUTED TAPS

LIST 406V
CNC DESIGN

**Plug
Bottom**



STYLE 1 - #4 THROUGH #10

STYLE 2 - 1/4 THROUGH 3/8

STYLE 3 - 7/16 THROUGH 3/4

TAP SIZE	SERIES DESIGN.	H LIMIT	NO. OF FLUTES	406V	
				PLUG EDP NUMBER	BOTTOM EDP NUMBER
4 - 40	NC	H-2	2	84992	84993
5 - 40	NC	H-2	2	84998	84999
6 - 32	NC	H-3	3	85001	85002
8 - 32	NC	H-3	3	85003	85004
10 - 24	NC	H-3	3	85005	85006
10 - 32	NF	H-3	3	85007	85008
1/4 - 20	NC	H-3	3	85009	85011
1/4 - 20	NC	H-5	3	85012	85013
1/4 - 28	NF	H-3	3	85014	85015
5/16 - 18	NC	H-3	3	85016	85017
5/16 - 18	NC	H-5	3	85018	85019
5/16 - 24	NF	H-3	3	85021	85022
3/8 - 16	NC	H-3	3	85023	85024
3/8 - 16	NC	H-5	3	85025	85026
3/8 - 24	NF	H-3	3	85027	85028
7/16 - 14	NC	H-3	3	85029	85031
7/16 - 14	NC	H-5	3	85032	85033
7/16 - 20	NF	H-3	3	85034	85035
1/2 - 13	NC	H-3	3	85036	85037
1/2 - 13	NC	H-5	3	85038	85039
1/2 - 20	NF	H-3	3	85041	85042
9/16 - 12	NC	H-3	3	85043	85044
9/16 - 12	NC	H-5	3	85045	85046
9/16 - 18	NF	H-3	3	85047	85048
5/8 - 11	NC	H-3	3	85049	85051
5/8 - 11	NC	H-5	3	85052	85053
5/8 - 18	NF	H-3	3	85054	85055
3/4 - 10	NC	H-3	3	85056	85057
3/4 - 10	NC	H-5	3	85058	85059
3/4 - 16	NF	H-3	3	85061	85062

See page 90 for Tap Dimensions.

**HIGH
VANADIUM
PENTA
BLUE**

PREMIUM STEEL SPIRAL POINT TAPS WITH PENTA RELIEF

**LIST 402VPR
CNC DESIGN**

Spiral Point Plug



PENTA

STYLE 1 - #4 THROUGH #10		STYLE 2 - 1/4 THROUGH 3/8			STYLE 3 - 7/16 THROUGH 3/4	
TAP SIZE	SERIES DESIGN.	H LIMIT	NO. OF FLUTES	BRIGHT	PENTA BLUE	
				SPPT PLUG EDP NUMBER	SPPT PLUG EDP NUMBER	
4 - 40	NC	H-2	2	86902	86903	
5 - 40	NC	H-2	2	86906	86907	
6 - 32	NC	H-3	3	86910	86911	
8 - 32	NC	H-3	3	86914	86915	
10 - 24	NC	H-3	3	86918	86919	
10 - 32	NF	H-3	3	86920	86921	
1/4 - 20	NC	H-3	3	86922	86923	
1/4 - 20	NC	H-5	3	86924	86925	
1/4 - 28	NF	H-3	3	86926	86927	
5/16 - 18	NC	H-3	3	86928	86929	
5/16 - 18	NC	H-5	3	86930	86931	
5/16 - 24	NF	H-3	3	86932	86933	
3/8 - 16	NC	H-3	3	86934	86935	
3/8 - 16	NC	H-5	3	86936	86937	
3/8 - 24	NF	H-3	3	86938	86939	
7/16 - 14	NC	H-3	3	86940	86941	
7/16 - 14	NC	H-5	3	86942	86943	
7/16 - 20	NF	H-3	3	86944	86945	
1/2 - 13	NC	H-3	3	86946	86947	
1/2 - 13	NC	H-5	3	86948	86949	
1/2 - 20	NF	H-3	3	86950	86951	
9/16 - 12	NC	H-3	3	86952	86953	
9/16 - 12	NC	H-5	3	86954	86955	
9/16 - 18	NF	H-3	3	86956	86957	
5/8 - 11	NC	H-3	3	86958	86959	
5/8 - 11	NC	H-5	3	86960	86961	
5/8 - 18	NF	H-3	3	86962	86963	
3/4 - 10	NC	H-3	3	86964	86965	
3/4 - 10	NC	H-5	3	86966	86967	
3/4 - 16	NF	H-3	3	86968	86969	

See page 90 for Tap Dimensions.

Penta Relief – Special thread geometry that allows for freer cutting. Available in Standard Taps in List Numbers 106A in size #10 with 2 & 3 Flutes and larger sizes, 103, 102C, 402VPR, 402VMPR, 403V, 403VM, 407VPR and 407VMPR.

Penta Blue – Combination of special PENTA Relief and Blue Diamond Surface Treatment.

**HIGH
 VANADIUM
 PENTA
 BLUE**

PREMIUM STEEL SLOW SPIRAL FLUTED TAPS WITH PENTA RELIEF

**LIST 407VPR
 CNC DESIGN**

**Modified Bottom 3 to 3-1/2 Thread Chamfer
 Bottom 1 to 2 Thread Chamfer**



PENTA

STYLE 1 - #4 THROUGH #10

STYLE 2 - 1/4 THROUGH 3/8

STYLE 3 - 7/16 THROUGH 3/4

TAP SIZE	SERIES DESIGN.	H LIMIT	NO. OF FLUTES	BRIGHT		PENTA BLUE	
				MOD. BOTT EDP NUMBER	BOTTOM EDP NUMBER	MOD. BOTT EDP NUMBER	BOTTOM EDP NUMBER
4 - 40	NC	H-2	2	86702	86703	86704	86705
5 - 40	NC	H-2	2	86706	86707	86708	86709
6 - 32	NC	H-3	3	86710	86711	86712	86713
8 - 32	NC	H-3	3	86714	86715	86716	86717
10 - 24	NC	H-3	3	86718	86719	86720	86721
10 - 32	NF	H-3	3	86722	86723	86724	86725
1/4 - 20	NC	H-3	3	86734	86735	86736	86737
1/4 - 20	NC	H-5	3	86738	86739	86740	86741
1/4 - 28	NF	H-3	3	86742	86743	86744	86745
5/16 - 18	NC	H-3	3	86746	86747	86748	86749
5/16 - 18	NC	H-5	3	86750	86751	86752	86753
5/16 - 24	NF	H-3	3	86754	86755	86756	86757
3/8 - 16	NC	H-3	3	86758	86759	86760	86761
3/8 - 16	NC	H-5	3	86762	86763	86764	86765
3/8 - 24	NF	H-3	3	86766	86767	86768	86769
7/16 - 14	NC	H-3	3	86770	86771	86772	86773
7/16 - 14	NC	H-5	3	86774	86775	86776	86777
7/16 - 20	NF	H-3	3	86778	86779	86780	86781
1/2 - 13	NC	H-3	3	86782	86783	86784	86785
1/2 - 13	NC	H-5	3	86786	86787	86788	86789
1/2 - 20	NF	H-3	3	86790	86791	86792	86793
9/16 - 12	NC	H-3	3	86794	86795	86796	86797
9/16 - 12	NC	H-5	3	86798	86799	86802	86803
9/16 - 18	NF	H-3	3	86804	86805	86806	86807
5/8 - 11	NC	H-3	3	86808	86809	86810	86811
5/8 - 11	NC	H-5	3	86812	86813	86814	86815
5/8 - 18	NF	H-3	3	86816	86817	86818	86819
3/4 - 10	NC	H-3	3	86820	86821	86822	86823
3/4 - 10	NC	H-5	3	86824	86825	86826	86827
3/4 - 16	NF	H-3	3	86828	86829	86830	86831

Modified Bottom Taps have points on the thread end for sizes up to and including M10 & 3/8". Please specify when ordering if the points are to be removed.

Penta Relief – Special thread geometry that allows for freer cutting. Available in Standard Taps in List Numbers 106A in size #10 with 2 & 3 Flutes and larger sizes, 103, 102C, 402VPR, 402VMPP, 403V, 403VM, 407VPR and 407VMPP.

Penta Blue – Combination of special PENTA Relief and Blue Diamond Surface Treatment.

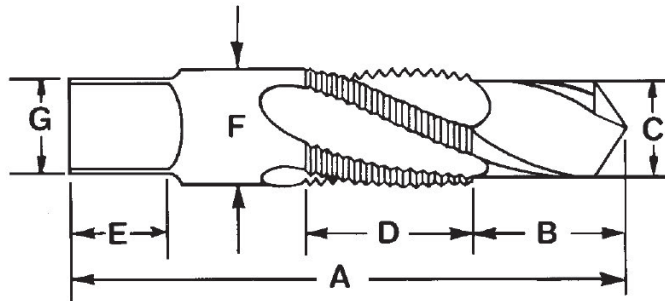
H.S.S. COMBINED PIPE TAPS AND DRILLS

LIST 18

NPT
NPTF



TAP SIZE	18	
	NPT EDP NUMBER	NPTF EDP NUMBER
1/16 - 27	63010	63012
1/8 - 27	63020	63022
1/4 - 18	63030	63032
3/8 - 18	63040	63042
1/2 - 14	63050	63052
3/4 - 14	63060	63062
1 - 11 1/2	63070	63072



COMBINED TAPER PIPE TAPS AND DRILLS GENERAL DIMENSIONS

TAP SIZE	NO. OF FLUTES	A O/A LENGTH	B DRILL LENGTH	C		D THREAD LENGTH	E SQUARE LENGTH	F SHANK DIAMETER	G SQUARE SIZE
				DRILL SIZE	DRILL DIAMETER				
1/16 - 27	4	2 13/16	11/16	D	.2460	11/16	3/8	.312	.234
1/8 - 27	4	2 7/8	3/4	R	.3390	3/4	3/8	.437	.328
1/4 - 18	4	3 5/16	7/8	7/16	.4375	1 1/16	7/16	.562	.421
3/8 - 18	4	3 1/2	15/16	37/64	.5781	1 1/16	1/2	.700	.531
1/2 - 14	4	4 3/8	1 1/4	45/64	.7031	1 3/8	5/8	.687	.515
3/4 - 14	5	4 9/16	1 5/16	59/64	.9219	1 3/8	11/16	.906	.679
1 - 11 1/2	5	5 3/8	1 5/8	1 5/32	1.1563	1 3/4	13/16	1.125	.843

DUO-ACME TANDEM STYLE TAPS

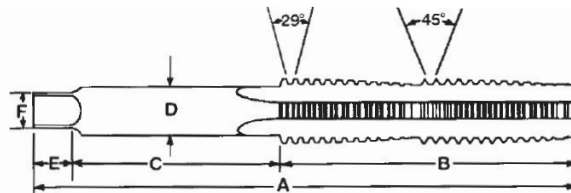
LIST 29
RIGHT HAND

NA2G Ground Thread



Reiff & Nestor "DUO-ACME" Tandem Style Taps adequately fill the need for Standard "off-the-shelf" Acme Taps. They perform Off-hand, as well as Production Tapping where applicable. The "DUO-ACME" tap is a combination Roughing and Finishing Tap. The Roughing section has a free cutting 45° Thread Form with controlled chip loading. The Finishing section then cuts a "split chip" as it sizes the 29° Thread Form. The listed "Maximum" should not be exceeded unless approved by our application engineers.

	TAP SIZE	NO. OF FLUTES	29
			NA2G EDP NUMBER
	1/2 - 10	4	63110
	5/8 - 8	4	63120
	3/4 - 6	4	63130
	7/8 - 6	4	63140
	1 - 5	4	63150
	1 1/8 - 5	4	63160
	1 1/4 - 5	4	63170
	1 3/8 - 4	4	63180
	1 1/2 - 4	4	63190



DUO-ACME TANDEM STYLE TAPS GENERAL DIMENSIONS

TAP SIZE	A OVERALL LENGTH	B THREAD LENGTH	C SHANK LENGTH	D SHANK DIAMETER	E SQUARE LENGTH	F SQUARE ACROSS FLATS	MAX. DEPTH OF STEEL OR BRONZE NUT	MAX. DEPTH OF BRASS OR CAST IRON NUT
1/2 - 10	5	2 5/8	1 15/16	.381	7/16	.286	1	1 1/2
5/8 - 8	6 5/8	3 1/2	2 9/16	.480	9/16	.360	1 1/4	1 7/8
3/4 - 6	8	4 1/2	2 7/8	.573	5/8	.430	1 1/2	2 1/4
7/8 - 6	9	4 1/2	3 13/16	.684	11/16	.513	1 3/4	2 5/8
1 - 5	10 1/2	6	3 3/4	.760	3/4	.570	2	3
1 1/8 - 5	11	6	4 1/8	.896	7/8	.672	2 1/4	3 3/8
1 1/4 - 5	12	6	5	1.021	1	.766	2 1/2	3 3/4
1 3/8 - 4	12 5/8	6 1/2	5 1/16	1.108	1 1/16	.831	2 3/4	4 1/8
1 1/2 - 4	13	6 1/2	5 7/16	1.108	1 1/16	.831	3	4 1/2

LEFT HAND TAPS MACHINE SCREW & FRACTIONAL SIZES

LIST 117
LEFT HAND

**Taper
Plug
Bottom**



TAP SIZE	SERIES DESIGN.	NO. OF FLUTES	H LIMIT	117		
				LEFT HAND TAPER EDP NUMBER	LEFT HAND PLUG EDP NUMBER	LEFT HAND BOTTOM EDP NUMBER
6 - 32	NC	3	H-3	80001	80002	80003
6 - 40	NF	3	H-2	80007	80008	80009
8 - 32	NC	4	H-3	80011	80012	80013
8 - 36	NF	4	H-2	80017	80018	80019
10 - 24	NC	4	H-3	80021	80022	80023
10 - 32	NF	4	H-3	80027	80028	80029
1/4 - 20	NC	4	H-3	80031	80032	80033
1/4 - 28	NF	4	H-3	80037	80038	80039
5/16 - 18	NC	4	H-3	80041	80042	80043
5/16 - 24	NF	4	H-3	80047	80048	80049
3/8 - 16	NC	4	H-3	80051	80052	80053
3/8 - 24	NF	4	H-3	80057	80058	80059
7/16 - 14	NC	4	H-3	80061	80062	80063
7/16 - 20	NF	4	H-3	80067	80068	80069
1/2 - 13	NC	4	H-3	80071	80072	80073
1/2 - 20	NF	4	H-3	80077	80078	80079
9/16 - 12	NC	4	H-3	80081	80082	80083
9/16 - 18	NF	4	H-3	80087	80088	80089
5/8 - 11	NC	4	H-3	80091	80092	80093
5/8 - 18	NF	4	H-3	80097	80098	80099
11/16 - 11	NS	4	H-3	80101	80102	80103
11/16 - 16	NS	4	H-3	80107	80108	80109
3/4 - 10	NC	4	H-3	80111	80112	80113
3/4 - 16	NF	4	H-3	80117	80118	80119
7/8 - 9	NC	4	H-4	80121	80122	80123
7/8 - 14	NF	4	H-4	80127	80128	80129
1 - 8	NC	4	H-4	80131	80132	80133
1 - 12	NF	4	H-4	80137	80138	80139
1 - 14	NS	4	H-4	80141	80142	80143
1 1/8 - 7	NC	4	H-4	80147	80148	80149
1 1/8 - 12	NF	4	H-4	80151	80152	80153
1 1/4 - 7	NC	4	H-4	80157	80158	80159
1 1/4 - 12	NF	6	H-4	80161	80162	80163
1 3/8 - 6	NC	4	H-4	80167	80168	80169
1 3/8 - 12	NF	6	H-4	80171	80172	80173
1 1/2 - 6	NC	4	H-4	80177	80178	80179
1 1/2 - 12	NF	6	H-4	80181	80182	80183

See page 89 for Tap Dimensions.

NATIONAL EXTRA FINE PITCH (NEF) HAND TAPS

LIST 116

Taper
 Plug
 Bottom



TAP SIZE	H LIMIT	NO. OF FLUTES	116		
			TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER
12 - 32	H-3	4	83001	83002	83003
1/4 - 32	H-3	4	83007	83008	83009
1/4 - 32	H-5	4	84007	84008	84009
5/16 - 32	H-3	4	83011	83012	83013
5/16 - 32	H-5	4	84011	84012	84013
3/8 - 32	H-3	4	83017	83018	83019
3/8 - 32	H-5	4	84017	84018	84019
7/16 - 28	H-3	4	83021	83022	83023
7/16 - 28	H-5	4	84021	84022	84023
1/2 - 28	H-3	4	83027	83028	83029
1/2 - 28	H-5	4	84027	84028	84029
9/16 - 24	H-3	4	83031	83032	83033
9/16 - 24	H-5	4	84031	84032	84033
5/8 - 24	H-3	6	83037	83038	83039
5/8 - 24	H-5	6	84037	84038	84039
11/16 - 24	H-3	6	83041	83042	83043
11/16 - 24	H-5	6	84041	84042	84043
3/4 - 20	H-3	6	83047	83048	83049
3/4 - 20	H-5	6	84047	84048	84049
13/16 - 20	H-3	6	83051	83052	83053
13/16 - 20	H-5	6	84051	84052	84053
7/8 - 20	H-3	6	83057	83058	83059
7/8 - 20	H-5	6	84057	84058	84059
15/16 - 20	H-3	6	83061	83062	83063
15/16 - 20	H-5	6	84061	84062	84063
1 - 20	H-3	6	83067	83068	83069
1 - 20	H-5	6	84067	84068	84069
1 1/16 - 18	H-4	6	83071	83072	83073
1 1/16 - 18	H-3	6	84071	84072	84073
1 1/16 - 18	H-6	6	84271	84272	84273
1 1/8 - 18	H-4	6	83077	83078	83079
1 1/8 - 18	H-3	6	84077	84078	84079
1 1/8 - 18	H-6	6	84277	84278	84279
1 3/16 - 18	H-4	6	83081	83082	83083
1 3/16 - 18	H-3	6	84081	84082	84083
1 3/16 - 18	H-6	6	84281	84282	84283
1 1/4 - 18	H-4	6	83087	83088	83089
1 1/4 - 18	H-3	6	84087	84088	84089
1 1/4 - 18	H-6	6	84287	84288	84289
1 5/16 - 18	H-4	6	83091	83092	83093
1 5/16 - 18	H-3	6	84091	84092	84093

NOTE: Consult factory for larger quantities.

NATIONAL EXTRA FINE PITCH (NEF) HAND TAPS (CONTINUED)

LIST 116

Taper
 Plug
 Bottom



TAP SIZE	H LIMIT	NO. OF FLUTES	116		
			TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER
1 5/16 - 18	H-6	6	84291	84292	84293
1 3/8 - 18	H-4	6	83097	83098	83099
1 3/8 - 18	H-3	6	84097	84098	84099
1 3/8 - 18	H-6	6	84297	84298	84299
1 7/16 - 18	H-4	6	83101	83102	83103
1 7/16 - 18	H-3	6	84101	84102	84103
1 7/16 - 18	H-6	6	84301	84302	84303
1 1/2 - 18	H-4	6	83107	83108	83109
1 1/2 - 18	H-3	6	84107	84108	84109
1 1/2 - 18	H-6	6	84307	84308	84309

See page 89 for Tap Dimensions.

QUALITY TAPS SINCE 1912
www.rntap.com

BATTERED BOLT OR PIPE THREADS RESTORED QUICKLY WITH NU-TRIX WITHOUT CHANGING FIT

A few easy passes with the appropriate land of NU-TRIX over the damaged face of a bolt or pipe thread will restore the thread without reducing the diameter. As only the displaced metal is removed, the original fit is preserved. Any bolt or pipe of the corresponding thread number, regardless of diameter, may be repaired instantly with NU-TRIX.

For restoring bolt threads, eight assorted sizes of National Fine and National Coarse threads on each of two NU-TRIX Bolt Thread Restorers provide sixteen thread sizes in all. For external pipe threads, a set of three NU-TRIX Pipe Thread Restorers provide five pipe thread sizes; a companion set restores the same number of internal pipe thread sizes.

A set of nine NU-TRIX Thread Restorers is a valuable part of every machinist's or pipefitter's kit. Their small price is quickly repaid in time saved in repairing battered threads.

A #9 Metric NU-TRIX is now offered which provides eight common metric pitches.

APPLICATION	NU-TRIX NO.	THREAD SIZES ON EACH	EDP NUMBER
FOR BOLTS	No. 1	11, 12, 13, 14, 16, 18, 20 and 24	63400
	No. 2	9, 10, 12, 16, 20, 27, 28 and 32	63410
	No. 1 & No. 2 Set	63400 & 63410	63405
FOR PIPE (EXTERNAL)	No. 3	8 and 10	63420
	No. 4	8 and 11 1/2	63430
	No. 5	10 and 14	63440
FOR PIPE (INTERNAL)	No. 6	8 and 10	63450
	No. 7	8 and 11 1/2	63460
	No. 8	10 and 14	63470
METRIC NU-TRIX FOR BOLTS	No. 9	Metric Pitches 0.8, 1.0, 1.25, 1.50, 1.75, 2.0, 2.5, and 3.0	63480

NU-TRIX

- #1
- #2
- #9



NU-TRIX

- #3
- #4
- #5



NU-TRIX

- #6
- #7
- #8





TABLE 27

SPECIAL

MACHINE SCREW TAP PRICE LIST

Special High Speed Steel Ground Thread Machine Screw Taps. These prices do not apply to taps with special features of any type, except that they may be either right or left hand, with regular or optional flutes.

TAP SIZE	LIST PRICE															ADD FOR SPPT	ADD FOR SPFL
	1	2	3-5	6-8	9-11	12-23	24-47	48-71	72-95	96-143	144-239	240-479	480-719	720-999	1000+		
00-120	\$288.14	\$208.92	\$152.68	\$117.26	\$94.45	\$84.68	\$75.66	\$69.88	\$67.02	\$63.44	\$59.54	\$57.79	\$56.27	\$55.71	\$54.28	\$5.49	
00-90	169.60	205.04	148.63	113.52	90.63	80.91	71.84	66.34	63.12	59.54	56.91	54.28	53.51	53.46	53.30	5.49	
0	251.82	174.60	119.08	79.62	60.64	51.27	43.62	37.96	34.56	30.92	28.49	27.03	25.52	24.16	17.04	3.70	
1	250.86	172.54	116.62	80.25	58.85	48.92	41.78	36.17	32.25	29.06	26.60	24.76	23.27	22.32	15.70	3.42	
2	248.37	171.13	115.23	78.58	57.54	47.41	40.37	34.22	30.92	27.46	25.21	23.27	21.91	20.83	14.66	3.05	\$9.43
3	236.99	160.56	106.23	69.70	51.27	40.72	34.22	29.31	26.18	22.74	20.46	18.64	17.64	15.67	11.26	2.42	7.33
4	227.57	151.67	98.60	62.73	46.03	36.58	29.31	25.52	21.50	18.50	17.64	15.67	14.78	13.31	9.39	1.99	5.94
5	227.57	151.67	98.60	62.73	46.03	36.58	29.31	25.52	21.50	18.50	17.64	15.67	14.78	13.31	9.39	1.99	5.94
6	224.55	148.76	95.80	60.29	43.62	34.22	26.60	22.74	18.95	16.58	14.78	13.31	11.92	11.03	7.15	1.51	4.83
7	224.55	148.76	95.80	60.29	43.62	34.22	26.60	22.74	18.95	16.58	14.78	13.31	11.92	11.03	9.81	1.51	
8	224.55	148.76	95.80	60.29	43.62	33.42	26.60	22.74	18.95	16.58	14.78	13.31	11.92	11.03	7.50	1.51	4.83
9	225.02	149.28	95.80	60.29	43.62	34.22	27.03	22.74	18.95	16.58	15.18	13.31	12.26	11.03	10.18	1.70	
10	225.02	149.28	95.80	60.29	43.62	34.22	27.03	22.74	18.95	16.58	15.18	13.31	12.26	11.03	7.49	1.70	4.93
12	231.64	155.16	100.58	64.51	46.03	35.58	29.06	24.16	20.83	17.64	15.18	13.31	12.26	11.03	7.68	1.70	4.93
14	233.27	157.65	102.87	66.96	47.92	37.96	30.92	26.60	23.27	19.95	17.64	15.67	14.78	13.31	9.39	1.95	5.94

Prices on chart apply when taps are moderately oversize, but may not apply if amount oversize is excessive. If machine screw taps are more than .006" oversize, use next larger size.

For left hand spiral flute refer to Home Office for pricing.

**SCHEDULE A SECTION 1
SPECIAL FEATURES**

Add charge below for grinding an ETTCO Notch, or APEX GROOVE in standard taps. Also add for grinding neck in back of threads. #0 thru #12 the charge below applies for the first 1/4" length of neck, add again for each 1/2" additional length of neck. Taps larger than #12 add charge for each 1/2" length of neck. Add again for each 1/2" additional length.

QUANTITY	DIAMETER OF TAP – AMOUNT TO CHARGE PER TAP			
	#0 - 5/16"	3/8" - 1/2"	9/16" - 1"	1 1/8" - 1 1/2"
1	\$38.83	\$40.75	\$42.71	\$44.80
2	20.24	21.16	22.11	23.21
3 - 5	13.96	14.63	15.37	16.04
6 - 8	7.68	8.05	8.47	8.87
9 - 11	6.29	6.49	6.81	7.11
12 - 23	4.62	4.87	5.09	5.23
24 - 47	3.12	3.21	3.25	5.23
48 - 71	2.05	2.26	2.29	5.23
72 - 95	1.44	1.44	1.44	5.23
96 - 143	1.04	1.04	1.04	5.23
144 +	0.47	0.47	1.04	5.23



TABLE 25 (302) DIMENSIONS SPECIAL FRACTIONAL SIZE TAP PRICE LIST

Special High Speed Steel Ground Thread Taps are priced below. On sizes 1 1/16" and larger, consult Table 26 before selecting prices. These prices do not apply to taps with special features of any type except that they may be either right or left hand with listed flutes. 1/4" & 5/16" 2, 3, 4 Fl. - 3/8" to 1/2" 3, 4 Fl. - 9/16" to 3/4" 3, 4, 6 Fl. - 13/16" to 1 1/2" 4, 6 Fl. - 1 9/16" and larger 6, 8 Fl.

TAP SIZE	LIST PRICE											ADD FOR SPPT*	ADD FOR SPFL*	ADD FOR INT*
	1	2	3-5	6-8	9-11	12-23	24-47	48-71	72-95	96-143	144-239			
1/4	\$233.03	\$156.65	\$102.53	\$65.93	\$47.41	\$37.03	\$30.42	\$25.52	\$22.32	\$18.95	\$16.58	\$1.84	\$4.37	\$4.93
5/16	234.49	158.30	103.93	67.29	48.92	38.45	31.82	27.03	23.75	20.46	18.04	1.99	4.90	5.49
3/8	242.96	165.74	112.83	74.05	52.09	42.73	35.24	29.31	26.18	22.32	20.46	2.42	5.74	6.38
7/16	259.68	178.89	121.00	85.56	60.20	50.07	42.20	36.18	32.68	29.31	26.70	3.21	7.69	8.89
1/2	266.93	183.92	126.39	89.67	65.93	55.53	46.20	40.20	37.20	33.22	30.67	3.90	9.12	10.69
9/16	272.12	189.51	131.42	94.78	71.04	61.02	51.56	45.61	42.24	38.69	36.18	4.64	9.49	12.43
5/8	282.97	198.49	140.79	105.13	81.37	70.32	61.02	55.05	50.56	46.59	44.24	6.03	11.81	13.69
11/16	292.87	207.21	148.76	114.95	89.67	77.62	67.89	61.82	57.54	53.68	51.17	6.81	14.07	16.44
3/4	304.24	217.69	161.11	127.67	100.15	86.26	77.41	71.04	66.41	63.05	60.44	8.26	16.72	19.53
13/16	315.62	229.99	172.50	137.81	112.08	98.11	88.76	82.83	78.27	74.45	71.96	10.02	20.25	23.64
7/8	334.28	242.13	185.34	151.63	122.93	108.07	98.76	92.70	88.22	84.26	82.00	11.61	23.14	27.00
15/16	338.84	246.71	189.87	156.06	127.42	112.59	103.15	97.23	92.70	88.76	86.26	12.18	24.55	28.60
1	369.53	272.12	213.24	180.94	152.59	133.85	124.45	118.64	114.06	109.96	102.65	15.63	30.80	35.96
1 1/16, 1 1/8	415.48	312.94	252.94	217.70	189.43	170.42	161.11	155.20	150.21	146.81	133.85	20.95	41.85	
1 3/16, 1 1/4	467.00	357.54	294.44	260.68	235.56	215.61	200.25	173.81				26.88	53.73	
1 5/16	495.99	385.59	316.76	283.59	257.69	238.00	201.29					30.39	60.44	
1 3/8	519.77	408.87	338.99	305.94	280.12	260.68	223.72					33.55	67.32	
1 7/16, 1 1/2	617.13	523.89	431.15	384.49	354.10	327.60	288.61					43.32	86.63	
1 5/8	681.46	588.31	492.74	446.32	416.08	389.09	350.34					50.01	100.07	
1 3/4	717.25	624.07	527.03	480.35	450.35	423.37	384.49					54.96		
1 7/8	825.50	730.12	607.27	561.79	527.50	504.76	459.10					65.73		
2	861.37	765.87	641.53	595.96	561.79	538.85	493.36					70.44	140.89	
2 1/8	926.98	831.61	704.27	658.67	624.45	601.75	555.93							
2 1/4	1150.11	1035.32	876.14	796.34	750.85	728.16	682.52					97.54		
2 3/8	1208.57	1089.42	928.09	848.23	802.67	779.96	734.30							
2 1/2	1286.08	1166.88	1002.19	922.40	876.68	853.89	808.24					115.50		
2 5/8	1377.65	1257.78	1089.77	1013.38	964.35	941.49	896.06					127.92		
2 3/4	1697.08	1495.09	1235.81	1144.58	1092.32	1075.84	1030.58							
2 7/8	1770.28	1567.64	1305.76	1214.52	1169.04	1146.11	1100.60					157.14		
3	1874.29	1671.60	1405.21	1314.12	1268.45	1245.65	1200.01							
3 1/8	1936.40	1801.66	1529.58	1438.50	1392.80	1369.88	1324.43							
3 1/4	2108.94	1906.65	1629.63	1538.58	1492.85	1470.01	1424.42							
3 3/8	2220.98	2018.94	1737.39	1646.23	1600.59	1577.81	1532.17							
3 1/2	2658.61	2404.79	2098.14	1915.58	1847.19	1778.92								
3 5/8	2790.31	2528.19	2224.55	2042.09	1973.62	1905.38								
3 3/4	2927.31	2680.16	2355.49	2173.16	2104.75	2036.46								
3 7/8	3074.75	2812.48	2496.46	2314.08	2245.63	2177.25								
4	3228.49	2966.38	2646.61	2461.28	2392.83	2324.39								

NOTE ALL:*
 * 13/16" and larger spiral fluted taps
 * Interrupted taps 13/16" and larger
 * Left hand spiral fluted taps
 * REFER TO HOME OFFICE FOR PRICING

NOTE: Prices for larger quantities on application.



TABLE 26 (303)

SPECIAL

TAP PRICE LIST SHORT SERIES DIMENSIONS

Special High Speed Steel Ground Thread Taps to Table 26 (short) dimensions are used on fine pitch taps 1 1/16" through 1 1/2" major diameter with 14 or more threads per inch and on taps larger than 1 1/2" with 10 threads per inch. These prices do not apply to taps with special features of any type except that they may be either right or left handed with regular or optional flutes.

TAP SIZE	LIST PRICE								
	1	2	3-5	6-8	9-11	12-23	24-47	48-71	72-95
1 1/16	\$375.16	\$277.80	\$218.62	\$186.38	\$158.62	\$139.46	\$130.51	\$123.94	\$119.54
1 1/8									
1 3/16	418.62	315.59	255.83	220.06	191.85	173.00	164.10	157.33	130.54
1 1/4									
1 5/16	451.84	324.57	280.12	246.87	221.00	201.77	186.38	164.53	
1 3/8									
1 7/16	488.06	377.75	309.13	276.03	250.40	230.62	193.89		
1 1/2									
1 5/8	583.42	467.63	392.81	358.12	331.10	310.80	272.12		
1 3/4	631.17	538.47	444.60	397.99	367.82	340.86	302.08		
1 7/8	663.05	569.83	475.23	428.56	398.63	371.55	332.63		
2	695.57	602.99	506.32	450.72	429.59	402.70	363.77		
2 1/8	827.22	731.92	608.85	563.33	529.18	506.32	460.60		
2 1/4	891.57	796.90	671.09	625.20	591.36	568.43	522.87		
2 3/8	944.35	848.91	720.81	675.34	641.02	618.19	572.73		
2 1/2	1104.11	984.87	827.98	748.29	702.62	675.54	634.29		
2 5/8	1162.42	1043.32	883.99	804.25	758.55	735.82	690.18		
2 3/4	1218.74	1099.74	937.90	858.15	812.48	789.78	618.39		
2 7/8	1276.20	1157.22	992.84	902.75	867.30	844.58	799.04		
3	1347.82	1228.52	1061.14	981.37	935.73	913.03	867.30		
3 1/8	1429.74	1310.58	1139.45	1059.62	1013.98	991.35	945.74		
3 1/4	1684.10	1481.67	1223.41	1132.21	1086.08	1063.83	1018.16		
3 3/8	1764.95	1562.28	1300.56	1209.41	1163.74	1141.09	1095.48		
3 1/2	1848.77	1646.44	1380.92	1289.64	1244.06	1221.36	1175.64		
3 5/8	1937.50	1733.45	1464.28	1373.09	1327.85	1304.69	1259.41		
3 3/4	2029.03	1826.66	1553.44	1462.21	1416.69	1394.02	1348.28		
3 7/8	2128.35	1925.80	1648.42	1557.47	1511.45	1488.60	1443.18		
4	2231.83	2029.03	1747.26	1656.07	1610.41	1510.97	1467.59		

NOTE: Prices for larger quantities on application.



**TABLE 34
 SPECIAL GROUND THREAD PIPE TAP PRICE LIST**

1/16-1/8"	NPT NPS	NPT	NPT NPS	NPT	NPT	1/4"	NPT NPS	NPT	NPT NPS	NPT	NPT
QUANTITY	2 ¹ / ₈ " O/A	4" O/A	6" O/A	8" O/A	10" O/A	QUANTITY	2 ⁷ / ₁₆ " O/A	4" O/A	6" O/A	8" O/A	10" O/A
1	\$241.37	\$241.37	\$263.82	\$269.01	\$356.20	1	\$254.16	\$254.16	\$272.13	\$292.55	\$383.41
2	167.44	167.44	186.98	192.49	261.58	2	178.29	178.29	195.28	214.28	282.29
3-5	119.52	119.52	140.41	146.08	207.16	3-5	130.89	130.89	148.93	169.25	229.41
6-8	82.53	82.53	106.23	112.13	167.51	6-8	95.80	95.80	114.77	136.51	190.49
9-11	61.20	61.20	83.45	89.31	137.66	9-11	74.43	74.43	92.05	111.76	157.99
12-23	51.27	51.27	73.05	78.99	121.76	12-23	63.49	63.49	81.60	98.61	139.87
24-47	44.24	44.24	64.51	70.27	111.20	24-47	54.10	54.10	72.56	89.90	129.92
48-71	38.46	38.45	58.35	64.56	104.30	48-71	48.39	48.39	66.43	84.18	123.01
72-95	35.22	35.22	54.10	60.20	99.03	72-95	45.54	45.54	62.73	79.84	117.79
96-143	31.23	31.23	50.23	56.55		96-143	41.78	41.78	58.85	76.29	
144-239	29.31	29.31	48.39	54.25		144-239	39.86	39.86	56.50	73.93	
240-479	27.46	27.46	46.51	91.23		240-479	37.96	37.96	54.53	69.28	
480-719	25.52	25.52	44.65	50.80		480-719	36.17	36.17	53.16		
720	24.76	24.76	43.62	49.60		720	35.22	35.22	51.77		

ADD TO ABOVE FOR EACH PIECE:

INTERRUPTED THREAD	10.02	10.02	17.64	19.62	28.59	INTERRUPTED THREAD	14.23	14.23	20.83	27.69	34.75
SPIRAL FLUTE	8.67	8.67	15.28			SPIRAL FLUTE	10.64	10.64	14.90		

3/8"	NPT NPS	NPT	NPT NPS	NPT	NPT	1/2"	NPT NPS	NPT NPS	NPT	NPT	NPT
QUANTITY	2 ⁹ / ₁₆ " O/A	4" O/A	6" O/A	8" O/A	10" O/A	QUANTITY	3 ¹ / ₈ " O/A	6" O/A	8" O/A	10" O/A	12" O/A
1	\$273.14	\$273.14	\$289.77	\$318.59	\$421.15	1	\$300.55	\$342.67	\$378.47	\$505.75	\$538.09
2	194.37	194.37	211.21	234.96	314.56	2	216.22	254.21	285.40	385.93	418.32
3-5	147.09	147.09	166.88	191.20	260.56	3-5	171.62	210.14	241.68	331.32	363.70
6-8	115.23	115.23	133.75	158.97	223.87	6-8	139.44	179.20	207.91	293.22	325.65
9-11	91.10	91.10	107.98	132.07	191.49	9-11	112.02	152.68	181.10	263.84	296.21
12-23	78.65	78.65	94.83	117.62	169.77	12-23	97.66	134.69	163.18	241.35	273.72
24-47	70.18	70.18	86.26	108.88	159.24	24-47	89.17	125.19	154.45	223.87	256.26
48-71	64.51	64.51	80.62	103.16	152.32	48-71	83.45	119.52	148.72	198.89	231.28
72-95	59.73	59.73	75.90	98.86		72-95	78.65	115.73	144.40		
96-143	56.50	56.50	73.05	95.26		96-143	74.92	112.02	140.83		
144-239	54.10	54.10	70.18	92.91		144-239	73.05	104.43	133.82		
240-479	52.12	52.12	65.46	88.26		240-479	68.30				
480-719	50.23	50.23				480-719					
720	49.35	49.35				720					

ADD TO ABOVE FOR EACH PIECE:

INTERRUPTED THREAD	17.51	17.51	23.06	30.92	38.91	INTERRUPTED THREAD	24.07	36.84	46.79	57.59	66.96
SPIRAL FLUTE	15.06	15.06	19.70			SPIRAL FLUTE	20.58	31.30			



TABLE 34 (CONTINUED) SPECIAL GROUND THREAD PIPE TAP PRICE LIST

3/4"		NPT NPS	NPT NPS	NPT	NPT	NPT	1"		NPT NPS	NPT NPS	NPT	NPT	NPT
QUANTITY	3 1/4" O/A	6" O/A	8" O/A	10" O/A	12" O/A	QUANTITY	3 3/4" O/A	6" O/A	8" O/A	10" O/A	12" O/A	QUANTITY	12" O/A
1	\$351.52	\$417.56	\$493.82	\$631.69	\$712.35	1	\$421.27	\$504.34	\$597.13	\$781.96	\$908.25		
2	258.38	319.89	388.81	510.50	614.91	2	316.76	400.40	512.67	684.52	808.33		
3-5	211.07	275.54	336.99	450.75	538.01	3-5	268.70	348.46	445.95	632.43	708.36		
6-8	179.03	239.77	303.95	412.73	486.78	6-8	235.56	315.26	401.55	556.39	658.38		
9-11	150.60	211.52	278.45	383.29	453.71	9-11	210.14	289.99	372.89	523.35	620.88		
12-23	131.89	192.29	258.97	360.84	424.31	12-23	190.25	270.22	358.16	493.94	595.92		
24-47	122.93	183.41	222.18	318.35	381.85	24-47	175.05	233.03	310.60	451.47	545.97		
48-71	116.62	177.57				48-71	153.09						
72-95	112.08	172.50											
96-143	108.60	169.00											
144-239	101.11	161.52											
ADD TO ABOVE FOR EACH PIECE:													
INTERRUPTED THREAD	35.32	56.83	77.79	96.62	115.91	INTERRUPTED THREAD	30.67	46.75	62.13	78.28	94.62		
SPIRAL FLUTE	30.39	48.26	66.72			SPIRAL FLUTE	45.88						
1 1/4"		NPT NPS		1 1/2"		NPT NPS		2"		NPT NPS			
QUANTITY	4" O/A	QUANTITY	4 1/4" O/A	QUANTITY	4 1/2" O/A								
1	\$512.99	1	\$640.45	1	\$812.48								
2	407.40	2	551.94	2	721.29								
3-5	355.41	3-5	481.40	3-5	630.04								
6-8	322.23	6-8	434.87	6-8	584.49								
9-11	296.41	9-11	404.65	9-11	550.24								
12-23	276.49	12-23	377.75	12-23	527.50								
24-47	239.57	24-47	338.94	24-47	481.89								
ADD TO ABOVE FOR EACH PIECE:													
INTERRUPTED THREAD	47.89	INTERRUPTED THREAD	67.49	INTERRUPTED THREAD	96.50								
SPIRAL FLUTE	71.79	SPIRAL FLUTE	101.61	SPIRAL FLUTE	156.04								
2 1/2" NPT 5 1/2" O/A		3" NPT 6" O/A		3 1/2" NPT 6 1/2" O/A		4" NPT 6 3/4" O/A							
QUANTITY	ECONOMY	GRD. THD.	ECONOMY	GRD. THD.	ECONOMY	GRD. THD.	ECONOMY	GRD. THD.					
1	\$976.72	\$1,229.05	\$1,398.64	\$1,764.90	\$1,676.27	\$2,168.91	\$2,232.71	\$2,900.56					
2	862.83	1115.20	1204.62	1571.13	1481.91	1975.28	1981.88	2649.78					
3-5	748.71	1001.01	1010.97	1378.71	1288.71	1781.39	1788.30	2456.07					
6-8	669.02	921.24	919.80	1286.17	1197.38	1690.26	1606.27	2273.62					
9-11	623.31	875.76	874.16	1240.53	1151.89	1644.68	1537.30	2205.20					
12-23	600.49	852.91	851.35	1217.81	1128.49	1621.89	1468.99	2136.79					
24-47	554.98	807.33	805.65	1172.14	1083.56	1576.59							
ADD TO ABOVE FOR EACH PIECE:													
INTERRUPTED THREAD	105.37		153.01		205.70		278.84						



SPECIAL GROUND THREAD MACHINE SCREW SIZE EXTENSION TAP PRICE LIST

#4 QTY.	O.A.L. 4"	O.A.L. 6"	#6 QTY.	O.A.L. 4"	O.A.L. 6"	#8 QTY.	O.A.L. 4"	O.A.L. 6"	#10 QTY.	O.A.L. 4"	O.A.L. 6"
	1	\$251.47		\$268.28	1		\$244.84	\$259.39		1	\$244.05
2	174.32	189.43	2	167.68	180.55	2	166.88	179.66	2	165.88	176.49
3-5	124.14	139.77	3-5	117.52	130.84	3-5	116.74	130.00	3-5	115.74	126.80
6-8	81.88	98.28	6-8	75.55	89.80	6-8	74.81	88.93	6-8	73.88	85.93
9-11	60.58	75.55	9-11	54.25	67.08	9-11	53.52	66.24	9-11	52.58	63.21
12-23	50.89	65.94	12-23	44.57	57.46	12-23	43.83	56.63	12-23	42.87	53.61
24-47	43.44	56.98	24-47	37.13	48.51	24-47	36.36	47.68	24-47	35.43	44.66
48-71	37.80	51.36	48-71	31.46	42.87	48-71	30.72	42.02	48-71	29.77	39.02
72-95	34.30	48.33	72-95	27.99	39.86	72-95	27.22	39.01	72-95	26.31	36.00
96	30.90	44.76	96	24.58	36.28	96	23.85	35.43	96	22.90	32.40
FOR SPIRAL POINT ADD TO EACH PIECE:											
	2.73	5.40		2.64	4.42		2.55	4.25		2.44	3.77

TABLE 33 SPECIAL GROUND THREAD PULLEY TAP PRICE LIST

1/4" QTY.	O.A.L. 4"	O.A.L. 6"	O.A.L. 8"	O.A.L. 10"	O.A.L. 12"	5/16" QTY.	O.A.L. 4"	O.A.L. 6"	O.A.L. 8"	O.A.L. 10"	O.A.L. 12"
	1	\$231.97	\$243.72	\$265.17	\$274.83		\$284.33	1	\$232.71	\$243.72	\$266.25
2	158.47	167.84	184.57	192.91	201.90	2	159.24	167.84	185.34	194.51	203.48
3-5	110.71	120.48	135.80	143.45	154.52	3-5	111.44	120.48	136.32	145.02	156.12
6-8	74.33	85.43	99.81	105.06	114.29	6-8	75.09	85.43	100.61	106.55	115.78
9-11	53.04	62.73	75.90	80.83	89.50	9-11	53.80	62.73	76.37	82.35	91.01
12-23	43.33	52.73	64.98	69.07	76.33	12-23	44.10	52.73	65.53	70.52	77.81
24-47	35.91	43.62	55.53	60.32	67.56	24-47	36.64	43.62	56.55	61.81	69.07
48-71	30.24	37.96	49.48	54.55	61.81	48-71	30.99	37.96	50.56	56.08	63.32
72-95	26.78	35.22	45.06	50.21	57.46	72-95	27.52	35.22	45.61	51.73	58.99
96	23.36	31.23	41.28	46.64	53.89	96	24.12	31.23	42.24	48.16	55.41
FOR SPIRAL POINT ADD TO EACH PIECE:											
	2.45	3.90	5.19	5.94	7.06		2.63	3.90	5.19	6.14	7.26

3/8" QTY.	O.A.L. 4"	O.A.L. 6"	O.A.L. 8"	O.A.L. 10"	O.A.L. 12"	7/16" QTY.	O.A.L. 4"	O.A.L. 6"	O.A.L. 8"	O.A.L. 10"	O.A.L. 12"
	1	\$233.37	\$247.97	\$273.18	\$283.97		\$292.61	1	\$262.86	\$255.07	\$279.50
2	159.88	172.56	190.88	201.29	210.22	2	182.13	177.78	197.92	211.07	224.06
3-5	112.12	124.84	141.24	153.76	162.85	3-5	124.22	130.89	148.25	163.59	177.98
6-8	75.76	89.66	108.07	118.99	122.19	6-8	88.77	96.67	114.95	128.95	143.80
9-11	54.47	66.96	82.83	93.24	97.41	9-11	63.41	74.05	89.67	103.15	116.02
12-23	44.76	57.54	70.32	79.36	84.23	12-23	53.28	63.49	77.41	89.30	100.15
24-47	37.30	48.39	61.02	69.98	75.48	24-47	45.43	54.10	67.89	79.98	91.26
48-71	31.67	42.73	55.05	63.44	69.72	48-71	39.39	48.92	61.82	74.00	84.73
72-95	28.16	39.44	49.36	59.50	65.38	72-95	35.91	44.65	57.54	69.42	80.24
FOR SPIRAL POINT ADD TO EACH PIECE:											
	2.73	4.57	6.06	7.19	8.19		3.12	5.35	7.03	8.89	10.49



TABLE 33 SPECIAL GROUND THREAD PULLEY TAP PRICE LIST (CON'T)

1/2"	O.A.L. 4"	O.A.L. 6"	O.A.L. 8"	O.A.L. 10"	O.A.L. 12"	9/16"	O.A.L. 4"	O.A.L. 6"	O.A.L. 8"	O.A.L. 10"	O.A.L. 12"
QTY.						QTY.					
1	\$270.86	\$257.54	\$286.27	\$298.39	\$317.17	1	-	\$286.27	\$305.52	\$328.31	\$342.48
2	187.83	180.09	204.28	216.06	228.98	2	-	201.87	219.26	236.15	250.32
3-5	130.29	133.33	156.71	168.53	182.35	3-5	-	150.68	169.65	187.87	202.06
6-8	93.57	99.18	121.89	133.85	148.76	6-8	-	107.91	127.14	145.40	158.61
9-11	69.84	75.90	96.25	108.07	119.98	9-11	-	83.94	101.21	116.87	130.38
12-23	59.41	65.46	82.27	94.18	105.13	12-23	-	73.09	87.39	101.69	115.20
24-47	50.09	56.91	72.89	84.73	95.80	24-47	-	63.93	78.24	92.54	106.02
48-71	44.10	51.27	67.06	78.92	89.67	48-71	-	57.91	72.21	86.50	100.03
FOR SPIRAL POINT ADD TO EACH PIECE:											
	3.90	5.67	7.69	9.55	11.19		-	6.31	8.47	10.65	12.63

5/8"	O.A.L. 6"	O.A.L. 8"	O.A.L. 10"	O.A.L. 12"	O.A.L. 14"	3/4"	O.A.L. 6"	O.A.L. 8"	O.A.L. 10"	O.A.L. 12"	O.A.L. 14"
QTY.						QTY.					
1	\$273.52	\$318.84	\$342.95	\$366.80	\$382.64	1	\$303.58	\$342.31	\$372.72	\$391.55	\$419.78
2	196.40	230.61	249.80	268.70	284.58	2	221.58	244.99	274.68	293.42	315.26
3-5	148.93	184.57	203.13	223.19	238.00	3-5	174.40	203.05	227.92	246.87	267.50
6-8	116.62	150.21	171.05	187.37	202.14	6-8	140.04	171.20	192.29	211.07	234.49
9-11	92.42	121.89	142.63	158.62	174.86	9-11	114.13	143.19	164.53	183.41	208.76
12-23	80.62	107.14	123.94	139.82	155.20	12-23	100.34	124.36	145.21	164.10	189.43
24-47	72.12	97.23	114.58	130.87	145.60	24-47	91.21	115.23	135.80	154.69	173.49
48-71	65.93	91.26	108.60	124.92	139.82	48-71	85.15	109.20	129.75	148.76	151.63
72-95	61.73	87.26	104.06	119.98	135.28	72-95					
FOR SPIRAL POINT ADD TO EACH PIECE:											
	7.65	11.52	14.07	16.47	18.74		10.45	14.07	17.21	20.09	22.92

7/8"	O.A.L. 6"	O.A.L. 8"	O.A.L. 10"	O.A.L. 12"	1"	O.A.L. 6"	O.A.L. 8"	O.A.L. 10"	O.A.L. 12"
QUANTITY					QUANTITY				
1	\$394.75	\$434.65	\$477.46	\$505.30	1	\$405.14	\$472.38	\$519.93	\$556.97
2	288.23	322.11	357.66	385.47	2	298.58	352.52	398.78	435.81
3-5	234.20	269.29	303.04	330.85	3-5	244.55	297.89	339.02	376.07
6-8	197.51	228.41	264.96	292.82	6-8	207.87	259.87	300.99	338.00
9-11	165.14	196.06	235.57	263.41	9-11	175.45	230.44	271.57	308.60
12-23	141.16	174.32	213.07	240.89	12-23	153.80	207.99	249.06	286.11
24-47	132.88	163.76	195.60	223.43	24-47	143.26	190.49	206.59	243.61
FOR SPIRAL POINT ADD TO EACH PIECE:									
	14.10	18.06	22.20	25.83		15.38	21.60	26.90	31.76

SURFACE TREATMENTS

A full array of surface treatments and coatings are available to enhance the taps performance depending on application and material being tapped. Listed below are the standard treatments we offer. Please consult factory for price and delivery on the new coatings Reiff & Nestor Company now has to offer for tapping all the exotic materials.

NITRIDE** Recommended where abrasive or wearing conditions exist. It may be used for ferrous, nonferrous, or nonmetallic materials.

NO. "5" Is very effective where an anti-galling characteristic is required, combined with high wear resistance. Recommended for use in ferrous materials.

NO. "0" This treatment imparts a lubricant retaining surface that has high anti-galling characteristics. It is recommended for use in ferrous materials.

CHROME A special Bright Hard Chrome plating process developed to increase tap life and impart an anti-galling surface to taps. It is recommended for use in all materials.

CONIT* Developed for use where extremely abrasive or wear-inducing, materials are encountered, both ferrous and nonferrous.

BLUE DIAMOND Is a specially treated electro chemical surface designed to eliminate surface welding when tapping soft stringy materials.

TITANIUM NITRIDE (PVD) Is also available upon request. (Prices for this treatment are available from our Sales Department.)

MULTICOAT C3 Multilayer Coating recommended for machining softer materials such as titanium, aluminum, and copper alloys, Good anti-galling properties, (Consult factory for pricing.)

MULTICOAT C4 Multilayer Coating having high hardness and anti-wear properties. Recommended for tapping tool steel, mold steel, and other heat treated materials. (Consult factory for pricing.)

* The Conit treatment has been broken down into progressive degrees of surface concentration called Conit-1, Conit-2, Conit-3 and Conit-6 — the larger number indicating the greater wear resistance.

** The Nitride treatment has been broken down into progressive degrees, as found applicable to various materials and tapping conditions. These treatments are: 1-N, 2-N, 3-N and 6-N. For ferrous, nonferrous and nonmetallic materials which cause dulling of the tools because of their abrasive characteristic. The numbers are individual specifications applied by our engineers for particular applications.

TABLE 301B – THREAD SERIES DESIGNATIONS

STANDARD TAP MARKING	PRODUCT THREAD DESIGNATION	THREAD SERIES	REFERENCES AMERICAN NATIONAL STANDARDS (ANSI/ASME)
ACME-C	ACME-C	Acme threads, centralizing	B1.5
ACME-G	ACME-G	Acme thread, general purpose (See also "STUB ACME")	B1.5
AMO	AMO	American Standard microscope objective threads	B1.11
NPT	ANPT	Aeronautical National Form taper pipe threads	(MIL-P-7105B)
BUTT	BUTT	Buttress Threads, pull type	B1.9
PUSH-BUTT	PUSH-BUTT	Buttress Threads, push type	B1.9
F-PTF	F-PTF	Dryseal fine taper pipe thread series	B1.20.3 (Appendix C)
M	M	Metric Screw Threads - M Profile with basic ISO 68 profile	B1.13M, B1.18M
MJ	MJ	Metric Screw Threads - MJ Profile with rounded root of radius 0.15011P to 0.18042P	B1.21M
MJS	MJS	Metric Screw Threads - MJ Profile, special series Class 5 interference fit Internal Threads	B1.12
NC	NC5IF	- Entire ferrous material range	
NC	NC5INF	- Entire nonferrous material range	
NGO (RH or LH)	NGO	National gas outlet threads	ANSI/CGA V-1 (B57.1)
NGS	NGS	National gas straight threads	ANSI/CGA V-1 (B57.1)
NGT	NGT	National gas taper threads	ANSI/CGA V-1 (B57.1)
NH	NH	American Standard hose coupling threads of full form	B2.4
NPS	NPSC	American Standard straight pipe threads in pipe couplings	B1.20.1
NPSF	NPSF	Dryseal American Standard fuel internal straight pipe threads	B1.20.3
NPSH	NPSH	American Standard straight hose coupling threads for joining to American Standard taper pipe threads	B2.4
NPSI	NPSI	Dryseal American Standard intermediate internal straight pipe threads	B1.20.3
NPSL	NPSL	American Standard straight pipe threads for loose-fitting mechanical joints with locknuts	B1.20.1
NPS	NPSM	American Standard straight pipe threads for free-fitting mechanical joints for fixtures	B1.20.2
NPT	NPT	American Standard taper pipe threads for general use	B1.20.1
NPTF	NPTF	Dryseal American Standard taper pipe threads	B1.20.3
NPTR	NPTR	American Standard taper pipe threads for railing joints	B1.20.1
PTF SHORT	PTF-SAE SHORT	Dryseal SAE short taper pipe threads	B1.20.3
PTF SPL SHORT	PTF-SPL SHORT	Dryseal special short taper pipe threads	B1.20.3 (Appendix C)
PTF SPL	PTF-SPL EXTRA		
X-SHORT	SHORT	Dryseal special extra short taper threads (See also "SPL-PTF")	B1.20.3 (Appendix C)
M	S	ISO Miniature screw threads 0.25 to 1.4mm inc.	
SGT	SGT	Special gas taper threads	ANSI/CGA V-1 (B57.1)
SPL-PTF	SPL-PTF	Dryseal special taper pipe threads	B1.20.3 (Appendix C)
STUB ACME	STUB ACME	Stub Acme threads	B1.8
STUB ACME M1	STUB ACME M1	Stub Acme Modified Form 1	B1.8
STUB ACME M2	STUB ACME M2	Stub Acme Modified Form 2	B1.8
N	UN	Unified inch screw thread, constant-pitch series	B1.1
NC	UNC	Unified inch screw thread, coarse-pitch series	B1.1
NF	UNF	Unified inch screw thread, fine-pitch series	B1.1
NEF	UNEF	Unified inch screw thread, extra-fine pitch series	B1.1
N	UNJ	Unified inch screw thread, constant-pitch series, with rounded root of radius 0.15011P to 0.18042P. (Ext. thd. only)	B1.15 (Draft) MIL-S-8879A
NC	UNJC	Unified inch screw thread, coarse-pitch series, with rounded root of radius 0.15011P to 0.18042P. (Ext. thd. only)	B1.15 (Draft) MIL-S-8879A

TABLE 301B – THREAD SERIES DESIGNATIONS (CONTINUED)

STANDARD TAP MARKING	PRODUCT THREAD DESIGNATION	THREAD SERIES	REFERENCES AMERICAN NATIONAL STDS. (ANSI/ASME)
NF	UNJF	Unified Inch Screw Thread, fine pitch series, with rounded root of radius 0.15011P to 0.18042P. (Ext. thd. only.)	B1.15 (Draft), MIL-S-8879 A
NEF	UNJEF	Unified Inch Screw Thread, extra-fine pitch series, with rounded root of radius 0.15011P to 0.18042P. (Ext. thd. only.)	B1.15 (Draft), MIL-S-8879A
N	UNR	Unified Inch Screw Thread, constant pitch series, with rounded root of radius not less than 0.108P. (Ext. thd. only.)	B1.1
NC	UNRC	Unified Inch Screw Thread, coarse thread series, with rounded root of radius not less than 0.108P. (Ext. thd. only.)	B1.1
NF	UNRF	Unified Inch Screw Thread, fine pitch series, with rounded root of radius not less than 0.108P. (Ext. thd. only.)	B1.1
NEF	UNREF	Unified Inch Screw Thread, extra-fine pitch series, with rounded root of radius not less than 0.108P. (Ext. thd. only.)	B1.1
UNM	UNM	Unified miniature thread series	B1.10
NS	UNS	Unified Inch Screw Thread, special diameter pitch, or length of engagement.	B1.1

TABLE 301B – THREAD SERIES DESIGNATIONS – BRITISH SCREW THREADS

STD. TAP & DIE MARK.	PROD. THD. DESIGNATION	THREAD SERIES	REFERENCE BRITISH STANDARD
BA	BA	British Association	BS93
BSC	BSC	British cycle	BS811
BSF	BSF	British WHITWORTH Fine	BS84
BSW	BSW	British WHITWORTH Coarse	BS84
OBSOLETE	BSPP	British Straight Pipe	OBSOLETE
OBSOLETE	BSPT	British Taper Pipe	OBSOLETE
WHIT	WHIT	British WHITWORTH Special	BS84
STD. TAP MARKING*	BRITISH PIPE THREADS		
G 1/4	G	British Internal Straight Pipe for Mechanical Joints	BS2779
Rc 1/4	Rc	British Internal Taper Pipe for Pressure Tight Joints	BS21
Rp 1/4	Rp	British Internal Straight Pipe for Pressure Tight Joints	BS21

METRIC THREAD LIMITS

TABLE 337 – STANDARD METRIC TAPS – GROUND THREAD

NOMINAL SIZE mm	PITCH mm	MAJOR DIAMETER INCHES			STANDARD PITCH DIAMETER LIMITS INCHES														
		BASIC	MIN.	MAX.	BASIC PITCH DIAMETER	D-3 LIMITS		D-4 LIMITS		D-5 LIMITS		D-6 LIMITS		D-7 LIMITS		D-8 LIMITS		D-9 LIMITS	
						MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
1.6	0.35	.062992	.0641	.0651	.054042	.0550	.0556												
2	0.4	.078740	.0801	.0811	.068511	.0695	.0701												
2.5	0.45	.098425	.0999	.1009	.086918	.0879	.0885												
3	0.5	.118110	.1198	.1208	.105324	.1063	.1069												
3.5	0.6	.137795	.1397	.1407	.122452			.1237	.1245										
4	0.7	.157480	.1597	.1613	.139580			.1408	.1416										
5	0.8	.196850	.1994	.2010	.176393			.1776	.1784										
6	1	.236220	.2395	.2411	.210648					.2122	.2132								
8	1.25	.314960	.3189	.3214	.282995					.2843	.2855								
10	1.5	.393700	.3985	.4010	.355343							.3572	.3584						
12	1.75	.472440	.4780	.4805	.427690							.4295	.4307						
14	2	.551180	.5575	.5600	.500037									.5020	.5036				
16	2	.629920	.6363	.6388	.578777									.5807	.5823				
20	2.5	.787400	.7954	.7979	.723471									.7254	.7270				
24	3	.944880	.9544	.9583	.868165												.8706	.8722	
30	3.5	1.181100	1.1922	1.1961	1.091599														1.0942 1.0962
36	4	1.417320	1.4300	1.4339	1.315034														1.3176 1.3196

*Examples to show location of size designation

TAPPING SPEED GUIDE

MATERIALS			SPEED FEET PER MINUTE	MATERIALS			SPEED FEET PER MINUTE
Aluminum Alloys			90-100	(Steel, Cont.) Carbon Steel, Plain	Annealed	40-80	
Brass			60-100		Tempered	15-40	
Bronze			40-60	Cast, Carbon	Annealed	40-50	
Copper			40-60		Tempered	30	
High Temperature Alloys	Cobalt Base		5-10	Cast, Corrosion Resistant, Heat Resistant, Low Alloy	Annealed	20-30	
		Iron Base	10-15		as Cast	20-25	
		Nickel Base	5-10		Annealed	30-45	
Iron	Ductile	Annealed	60	Precipitation Hardening, Stainless	Tempered	15-25	
		as Cast	30		Treated	10-15	
		Tempered	15-20		Annealed	15-45	
	Gray,	Annealed	80		Tempered	15-25	
		As Cast	35-60		Annealed	45-75	
	Malleable		60	Tool Steels, High Speed	Annealed	15-25	
		Heat Treated	25-50		Water Hardening	Annealed	50
Magnesium Alloys		Annealed	175	Ultra High Strength Steels	Annealed	35	
Manganese			20		Normalized	20	
Molybdenum Alloys		Stress Relieved	50		Tempered	3-7	
Monel		Annealed	20	Maraging Steels	Annealed	20-15	
Nickel Alloys		Annealed	25		Maraged	5-10	
Plastics,	Reinforced		25	Tantalum Alloys, Stress Relieved		3	
	Thermoplastics		50	Titanium Alloys, Commercial Pure,	Annealed	40-60	
	Thermosetting Plastics		50	Alpha & Alpha Beta Alloys,	Annealed	10-25	
Steels,	Alloys, Annealed or Cold Drawn		40-60	Tungsten Alloys, Pressed & Sintered		50	
	Quenched & Tempered		15-35	Zinc Alloys	Die Cast	150	
	Armor Plate		10				

CONVERSION TABLE, SURFACE FEET PER MINUTE TO REVOLUTIONS PER MINUTE

SPEED FEET PER MINUTE	20	25	30	40	50	60	70	80	90	100	110	120	130	140	150
TAP SIZE	REVOLUTIONS PER MINUTE														
0	1273	1592	1910	2546	3183	3820	4456	5093	5730	6366	7003	7639	8276	8913	9549
1	1047	1308	1570	2093	2617	3140	3663	4186	4710	5233	5756	6279	6808	7326	7849
2	888	1110	1333	1777	2221	2665	3109	3554	3999	4442	4886	5330	5774	6218	6662
3	772	964	1157	1543	1929	2315	2701	3086	3472	3858	4244	4629	5015	5401	5787
4	682	853	1023	1364	1705	2046	2387	2728	3069	3411	3751	4092	4434	4775	5116
5	611	764	917	1222	1528	1833	2139	2445	2750	3056	3361	3667	3973	4278	4584
6	553	691	829	1106	1382	1658	1934	2211	2487	2764	3040	3316	3592	3869	4145
8	466	583	699	932	1165	1398	1631	1864	2097	2330	2563	2796	3029	3262	3495
10	401	502	603	804	1005	1205	1406	1607	1808	2009	2210	2411	2612	2813	3014
12	354	442	531	707	884	1061	1238	1415	1592	1769	1945	2122	2300	2476	2653
1/4	306	382	458	611	764	917	1070	1222	1375	1528	1681	1833	1986	2139	2292
5/16	245	306	367	489	611	733	856	978	1100	1222	1345	1467	1589	1711	1833
3/8	204	255	306	407	509	611	713	815	917	1019	1120	1222	1324	1426	1528
7/16	175	219	262	349	437	524	611	698	786	873	960	1048	1135	1222	1310
1/2	153	191	229	306	382	458	535	611	688	764	840	917	993	1070	1146
9/16	137	172	206	275	344	412	481	550	619	687	756	825	893	963	1031
5/8	122	153	183	244	306	367	428	489	550	611	672	733	794	856	917
3/4	102	128	153	203	255	306	357	407	458	509	560	611	662	713	764
7/8	87	109	131	175	218	262	306	350	392	437	480	524	568	611	655
1	76	96	115	153	191	230	268	306	344	382	420	458	497	535	573



TAP RECOMMENDATIONS FOR CLASSES 2, 3, 2B & 3B UNIFIED AND AMERICAN SCREW THREADS

NUMBERED SIZES											
SIZE	THREADS PER INCH		RECOMMENDED TAP FOR CLASS OF THREAD				PITCH DIAMETER LIMITS FOR CLASS OF THREAD				
	NC	NF	CLASS 2	CLASS 3	CLASS 2B	CLASS 3B	MIN. ALL CLASSES (BASIC)	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	.0889	.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
FRACTIONAL SIZES											
SIZE	THREADS PER INCH		RECOMMENDED TAP FOR CLASS OF THREAD				PITCH DIAMETER LIMITS FOR CLASS OF THREAD				
	NC AND UNC	NF AND UNF	CLASS 2	CLASS 3	CLASS 2B	CLASS 3B	MIN. ALL CLASSES (BASIC)	MAX. CLASS 2	MAX. CLASS 3	MAX. CLASS 2B	MAX. CLASS 3B
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	GH5	.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
1	14 NS		GH4	GH2	GH6	GH4	.9536	.9585	.9572	.9609	.9590
1 1/8	7		GH8	GH4	GH8	GH4	1.0322	1.0407	1.0381	1.0416	1.0393
1 1/8		12	GH4	GH4	GH6	GH4	1.0709	1.0765	1.0749	1.0787	1.0768
1 1/4	7		GH8	GH4	GH8	GH4	1.1572	1.1657	1.1631	1.1668	1.1644
1 1/4		12	GH4	GH4	GH6	GH4	1.1959	1.2015	1.1999	1.2039	1.2019
1 3/8	6		GH8	GH4	GH8	GH4	1.2667	1.2768	1.2738	1.2771	1.2745
1 3/8		12	GH4	GH4	GH6	GH4	1.3209	1.3265	1.3249	1.3291	1.3270
1 1/2	6		GH8	GH4	GH8	GH4	1.3917	1.4018	1.3988	1.4022	1.3996
1 1/2		12	GH4	GH4	GH6	GH4	1.4459	1.4515	1.4499	1.4542	1.4522

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.

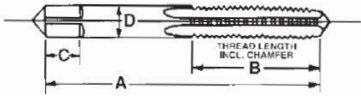


TAP DRILL SIZES AND PERCENTAGE OF THREADS

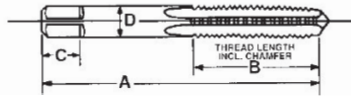
TAP		TAP DRILL	DECIM. EQUIV.	THEOR. % OF THREAD	TAP		TAP DRILL	DECIM. EQUIV.	THEOR. % OF THREAD	TAP		TAP DRILL	DECIM. EQUIV.	THEOR. % OF THREAD
NOM. SIZE	TPI				NOM. SIZE	TPI				NOM. SIZE	TPI			
0	80	#56	.0465	83	1/4	20	13/64	.2031	72	5/8	18	9/16	.5625	87
		3/64	.0469	81			#6	.2040	71			0.5687	.5687	78
1	64	#54	.0550	89	1/4	28	#5	.2055	69	5/8	20	37/64	.5781	72
		#53	.0595	67			#3	.2130	80			37/64	.5781	87
1	72	#53	.0595	75	1/4	32	7/32	.2188	67	5/8	24	0.5828	.5828	78
		1/16	.0625	58			7/32	.2188	77			5/8	28	19/32
2	56	#51	.0670	82	1/4	36	#2	.2210	71	5/8	32	19/32	.5938	77
		#50	.0700	69			#2	.2210	80			19/32	.5938	87
2	64	#49	.0730	56	5/16	18	F	.2570	77	11/16	12	39/64	.6094	72
		#50	.0700	79			G	.2610	71			5/8	16	.6250
3	48	#48	.0760	85	5/16	20	F	.2570	85	11/16	20	41/64	.6406	72
		5/64	.0781	77			G	.2610	79			11/16	24	41/64
3	56	#47	.0785	76	5/16	24	H	.2660	72	11/16	28	21/32	.6562	67
		#46	.0810	67			H	.2660	86			11/16	32	21/32
3	40	#45	.0820	63	5/16	28	I	.2720	75	3/4	10	41/64	.6406	84
		#48	.0810	78			J	.2770	66			21/32	.6562	72
4	40	#44	.0860	80	5/16	32	J	.2770	77	3/4	12	21/32	.6562	87
		#43	.0890	71			K	.2810	68			43/64	.6719	72
4	48	#42	.0935	57	5/16	36	9/32	.2812	67	3/4	16	11/16	.6875	77
		3/32	.0938	56			K	.2810	78			3/4	20	45/64
4	48	#43	.0890	85	3/8	16	7.25mm	.2854	75	3/4	28	23/32	.7188	67
		#42	.0935	68			5/16	.3125	77			3/4	32	23/32
5	40	#41	.0960	59	3/8	20	O	.3160	73	13/16	12	47/64	.7344	72
		#40	.0980	83			P	.3230	80			13/16	16	3/4
5	44	#39	.0995	79	3/8	24	Q	.3320	66	13/16	20	49/64	.7656	72
		#38	.1015	72			Q	.3320	79			13/16	28	25/32
5	44	#37	.1040	65	3/8	28	R	.3390	67	13/16	32	25/32	.7812	77
		#38	.1015	80			11/32	.3438	67			7/8	9	49/64
6	32	#37	.1040	84	3/8	32	11/32	.3438	77	7/8	12	25/32	.7812	87
		#36	.1065	78			S	.3480	67			51/64	.7969	72
6	40	7/64	.1094	70	7/16	14	S	.3480	75	7/8	14	0.8024	.8024	78
		#35	.1100	69			T	.3580	86			13/16	16	.8125
6	40	#34	.1110	67	7/16	16	23/64	.3594	84	7/8	16	13/16	.8125	77
		#33	.1130	77			3/8	.3750	77			7/8	20	53/64
8	32	#34	.1110	83	7/16	20	V	.3770	75	7/8	28	27/32	.8438	67
		#33	.1130	77			W	.3860	79			7/8	32	27/32
8	36	#32	.1160	68	7/16	28	25/64	.3906	72	15/16	12	27/32	.8438	87
		#29	.1360	69			Y	.4040	72			55/64	.8594	72
8	36	#29	.1360	78	7/16	32	Y	.4040	83	15/16	16	7/8	.8750	77
		#28	.1405	65			13/32	.4062	77			15/16	20	57/64
10	24	9/64	.1406	65	1/2	12	Z	.4130	80	15/16	28	29/32	.9062	67
		#27	.1440	85			27/64	.4219	72			15/16	32	29/32
10	32	#26	.1470	79	1/2	13	27/64	.4219	78	1	8	55/64	.8594	87
		#25	.1495	75			7/16	.4375	77			7/8	8	.8750
10	32	#24	.1520	70	1/2	16	29/64	.4531	72	1	12	29/32	.9062	87
		#23	.1540	66			15/32	.4688	67			59/64	.9219	72
10	32	5/32	.1562	83	1/2	32	15/32	.4688	77	1	14	59/64	.9219	84
		#22	.1570	81			15/32	.4688	87			0.9274	.9274	78
12	24	#21	.1590	76	9/16	12	31/64	.4844	72	1	16	15/16	.9375	77
		#20	.1610	71			1/2	.5000	77			1	20	61/64
12	28	11/64	.1719	82	9/16	18	0.5062	.5062	69	1	28	31/32	.9688	67
		#17	.1730	79			1/2	.5000	87			1	32	31/32
12	32	#16	.1770	84	9/16	20	0.5062	.5062	78	1 1/16	8	59/64	.9219	87
		#15	.1800	67			33/64	.5156	72			15/16	8	0.9274
12	32	#16	.1770	84	9/16	24	0.5203	.5203	78	1 1/16	12	15/16	.9375	77
		#15	.1800	78			17/32	.5312	67			31/32	.9688	87
1/4	20	#14	.1820	84	9/16	28	0.5263	.5263	78	1 1/16	16	1	1.0000	77
		#13	.1850	67			17/32	.5312	77			1 1/16	18	1
1/4	20	#14	.1820	84	5/8	11	17/32	.5312	79	1 1/16	20	11/64	1.0156	72
		#13	.1850	76			5/8	12	35/64			.5469	72	
1/4	20	3/16	.1875	70	5/8	16	9/16	.5625	77	1 1/16	20	11/64	1.0156	72
		#12	.1890	67			0.5687	.5687	69					

STANDARD TAP DIMENSIONS, GROUND THREAD

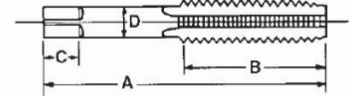
General Dimensions



STYLE 1



STYLE 2

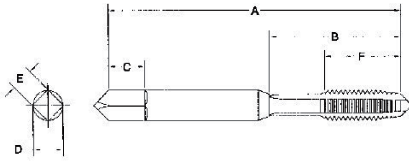


STYLE 3

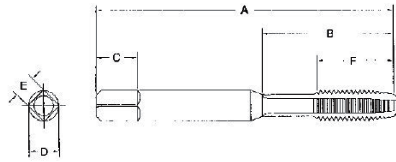
NOMINAL DIAMETER RANGE - INCHES		MACHINE SCREW SIZE NO.	NOMINAL FRACTIONAL DIAMETER INCHES	NOMINAL METRIC DIAMETER MILLIMETER	STYLE*	TAP DIMENSIONS - INCHES				
OVER	TO (INCL.)					O/A LENGTH A	THD. LGTH. B	SQ. LGTH. C	SHANK DIA. D	SIZE OF SQ. E
.052	.065	0	1/16	M1.6	1	1 5/8	5/16	3/16	.141	.110
.065	.078	1		M1.8	1	1 11/16	3/8	3/16	.141	.110
.078	.091	2		M2, M2.2	1	1 3/4	7/16	3/16	.141	.110
.091	.104	3	3/32	M2.5	1	1 13/16	1/2	3/16	.141	.110
.104	.117	4			1	1 7/8	9/16	3/16	.141	.110
.117	.130	5	1/8	M3, M3.15	1	1 15/16	5/8	3/16	.141	.110
.130	.145	6		M3.5	1	2	11/16	3/16	.141	.110
.145	.171	8	5/32	M4	1	2 1/8	3/4	1/4	.168	.131
.171	.197	10	3/16	M4.5, M5	1	2 3/8	7/8	1/4	.194	.152
.197	.223	12	7/32		1	2 3/8	15/16	9/32	.220	.165
.223	.260	14	1/4	M6, M6.3	2	2 1/2	1	5/16	.255	.191
.260	.323		5/16	M7, M8	2	2 23/32	1 1/8	3/8	.318	.238
.323	.395		3/8	M10	2	2 15/16	1 1/4	7/16	.381	.286
.395	.448		7/16		3	3 5/32	1 7/16	13/32	.323	.242
.448	.510		1/2	M12, M12.5	3	3 3/8	1 21/32	7/16	.367	.275
.510	.573		9/16	M14	3	3 19/32	1 21/32	1/2	.429	.322
.573	.635		5/8	M16	3	3 13/16	1 13/16	9/16	.480	.360
.635	.709		11/16	M18	3	4 1/32	1 13/16	5/8	.542	.406
.709	.760		3/4		3	4 1/4	2	11/16	.590	.442
.760	.823		13/16	M20	3	4 15/32	2	11/16	.652	.489
.823	.885		7/8	M22	3	4 11/16	2 7/32	3/4	.697	.523
.885	.948		15/16	M24	3	4 29/32	2 7/32	3/4	.760	.570
.948	1.010		1	M25	3	5 1/8	2 1/2	13/16	.800	.600
1.010	1.073		1 1/16	M27	3	5 1/8	2 1/2	7/8	.896	.672
1.073	1.135		1 1/8		3	5 7/16	2 9/16	7/8	.896	.672
1.135	1.198		1 3/16	M30	3	5 7/16	2 9/16	1	1.021	.766
1.198	1.260		1 1/4		3	5 3/4	2 9/16	1	1.021	.766
1.260	1.323		1 5/16	M33	3	5 3/4	2 9/16	1 1/16	1.108	.831
1.323	1.385		1 3/8		3	6 1/16	3	1 1/16	1.108	.831
1.385	1.448		1 7/16	M36	3	6 1/16	3	1 1/8	1.233	.925
1.448	1.510		1 1/2		3	6 3/8	3	1 1/8	1.233	.925
1.510	1.635		1 5/8	M39	3	6 11/16	3 3/16	1 1/8	1.305	.979
1.635	1.760		1 3/4	M42	3	7	3 3/16	1 1/4	1.430	1.072
1.760	1.885		1 7/8		3	7 5/16	3 9/16	1 1/4	1.519	1.139
1.885	2.010		2	M48	3	7 5/8	3 9/16	1 3/8	1.644	1.233
2.010	2.135		2 1/8		3	8	3 9/16	1 3/8	1.769	1.327
2.135	2.260		2 1/4	M56	3	8 1/4	3 9/16	1 7/16	1.894	1.420
2.260	2.385		2 3/8		3	8 1/2	4	1 7/16	2.019	1.514
2.385	2.510		2 1/2		3	8 3/4	4	1 1/2	2.100	1.575
2.510	2.635		2 5/8	M64	3	8 3/4	4	1 1/2	2.225	1.669
2.635	2.760		2 3/4		3	9 1/4	4	1 9/16	2.350	1.762
2.760	2.885		2 7/8	M72	3	9 1/4	4	1 9/16	2.475	1.856
2.885	3.010		3		3	9 3/4	4 9/16	1 5/8	2.543	1.907
3.010	3.135		3 1/8		3	9 3/4	4 9/16	1 5/8	2.668	2.001
3.135	3.260		3 1/4	M80	3	10	4 9/16	1 3/4	2.793	2.095

*Styles shown are for Ground Thread Taps.

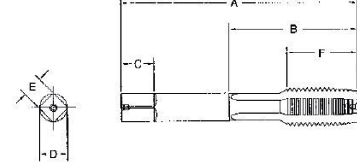
CNC DESIGN TAP DIMENSIONS, GROUND THREAD



STYLE 1



STYLE 2



STYLE 3

NOMINAL DIAMETER RANGE - INCHES		MACHINE SCREW SIZE NO.	NOMINAL FRACTIONAL DIAMETER INCHES	NOMINAL METRIC DIAMETER MILLIMETER	STYLE	TAP DIMENSIONS - INCHES				
OVER	TO (INCL.)					OVERALL LENGTH A	THREAD LENGTH F	REACH B	SHANK DIAMETER D	SQUARE SIZE C/E
.104	.117	4			1	1-7/8	5/16	25/32	.141	3/16X.110
.117	.130	5	1/8	M3, M3.15	1	1-15/16	5/16	25/32	.141	3/16X.110
.130	.145	6		M3.5	1	2	3/8	13/16	.141	3/16X.110
.145	.171	8	5/32	M4	1	2-1/8	3/8	7/8	.168	1/4X.131
.171	.197	10	3/16	M4.5, M5	1	2-3/8	1/2	1	.194	1/4X.152
.197	.223	12	7/32		1	2-3/8	1/2	1-1/16	.220	9/32X.165
.223	.260	14	1/4	M6, M6.3	2	2-1/2	5/8	1-1/8	.255	5/16X.191
.260	.323		5/16	M7, M8	2	2-23/32	11/16	1-1/4	.318	3/8X.238
.323	.395		3/8	M10	2	2-15/16	3/4	1-5/16	.381	7/16X.286
.395	.448		7/16		3	3-5/32	7/8	-	.323	13/32X.242
.448	.510		1/2	M12, M12.5	3	3-3/8	15/16	-	.367	7/16X.275
.510	.573		9/16	M14	3	3-19/32	1	-	.429	1/2X.322
.573	.635		5/8	M16	3	3-13/16	1-1/8	-	.480	9/16X.360
.635	.709		11/16	M18	3	4-1/32	1-3/16	-	.542	5/8X.406
.709	.760		3/4		3	4-1/4	1-1/4	-	.590	11/16X.422



METRIC TAP DRILL SIZES AND PERCENTAGES OF THREADS

TAP SIZE	TAP DRILL	DECIMAL EQUIV.	THEOR. % OF THREAD	TAP SIZE	TAP DRILL	DECIMAL EQUIV.	THEOR. % OF THREAD	TAP SIZE	TAP DRILL	DECIMAL EQUIV.	THEOR. % OF THREAD
M1.6X3.5	1.25mm	.0492	77	M8X1.25	I	.2720	67	M22X1.5	20.5mm	.8071	77
	1.3mm	.0512	66	M8X1	7mm	.2756	77	M24X3	13/16	.8125	70
	#55	.0520	61		J	.2770	74		21mm	.8268	77
M1.8X.35	1.45mm	.0571	77	M10X1.5	8.5mm	.3346	77	M24X2	27/32	.8438	66
	1.5mm	.0591	66	M10X1.25	R	.3390	71		22mm	.8661	77
	#53	.0595	64		8.75mm	.3445	77	7/8	.8750	68	
M2X.4	1.6mm	.0630	77	M12X1.75	S	.3480	71	M27X3	24mm	.9449	77
	#52	.0635	74		13/32	.4062	74	61/64	.9531	72	
M2.2X.45	1.75mm	.0689	77	M12X1.25	Z	.4130	66	M27X2	25mm	.9843	77
	#50	.0700	72		27/64	.4219	79		63/64	.9844	77
M2.5X.45	2.05mm	.0807	77	M14X2	11mm	.4331	62	M30X3.5	26.5mm	1.0433	77
	#45	.0820	71		12mm	.4724	77		1 1/16	1.0625	66
M3X.5	2.5mm	.0984	77	M14X1.5	31/64	.4844	65	M30X2	28mm	1.1024	77
	#39	.0995	73		12.5mm	.4921	77		1 7/64	1.1094	70
M3.5X.6	2.9mm	.1142	77	M16X2	1/2	.5000	67	M33X3.5	29.5mm	1.1614	77
	#32	.1160	71		14mm	.5512	77		1 11/64	1.1719	71
M4X.7	3.3mm	.1299	77	M16X1.5	9/16	.5625	66	M33X2	31mm	1.2205	77
	3.4mm	.1339	66		14.5mm	.5709	77		1 15/64	1.2344	63
M4.5X.75	#29	.1360	60	M18X2.5	37/64	.5781	68	M36X4	32mm	1.2598	77
	3.75mm	.1476	77		15.5mm	.6102	77		1 17/64	1.2656	74
M5X.8	#25	.1495	72	M18X1.5	5/8	.6250	65	M36X3	1 19/64	1.2969	78
	4.2mm	.1654	77		16.5mm	.6496	77		33mm	1.2992	77
M6X1	#18	.1695	67	M20X2.5	21/32	.6562	68	M39X4	1 5/16	1.3125	68
	5mm	.1969	77		17.5mm	.6890	77		1 3/8	1.3750	78
M7X1	#8	.1990	73	M20X1.5	45/64	.7031	66	M39X3	35mm	1.3780	77
	6mm	.2362	77		18.5mm	.7283	77		1 25/64	1.3906	71
M8X1.25	B	.2380	74	M22X2.5	47/64	.7344	69	36mm	1.4173	77	
	6.75mm	.2657	77		19.5mm	.7677	77	1 27/64	1.4219	74	
	6.8mm	.2677	74		25/32	.7812	66				

PIPE TAP DRILL SIZES

TAP SIZE	*NPT		*NPTF		STRAIGHT	
	TAP DRILL	DECIMAL EQUIV.	TAP DRILL	DECIMAL EQUIV.	TAP DRILL	DECIMAL EQUIV.
1/16	D	.2460	D	.2460	1/4	.2500
1/8	Q	.3320	R	.3390	11/32	.3438
1/4	7/16	.4375	7/16	.4375	7/16	.4375
3/8	9/16	.5625	37/64	.5781	37/64	.5781
1/2	45/64	.7031	45/64	.7031	23/32	.7188
3/4	29/32	.9062	59/64	.9219	59/64	.9219
1	1 9/64	1.1406	1 5/32	1.1562	1 5/32	1.1562
1 1/4	1 31/64	1.4844	1 1/2	1.5000	1 1/2	1.5000
1 1/2	1 47/64	1.7344	1 47/64	1.7344	1 3/4	1.7500
2	2 13/64	2.2031	2 7/32	2.2188	2 7/32	2.2188
2 1/2	2 5/8	2.6250	2 41/64	2.6406	2 21/32	2.6562
3			3 17/64	3.2656		

*For tapping without reaming.

STANDARD PIPE TAP DIMENSIONS, STRAIGHT AND TAPER, GROUND THREAD



DIMENSIONS IN INCHES

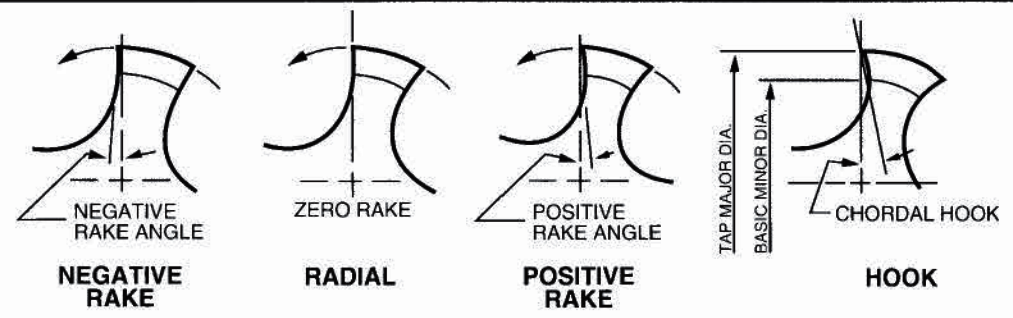
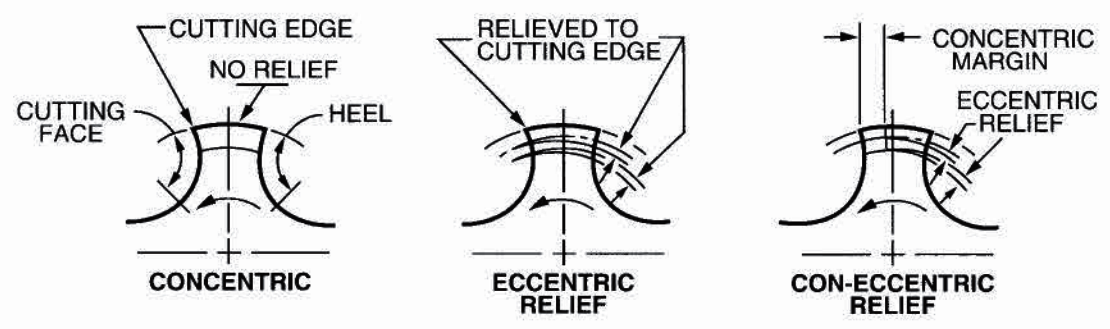
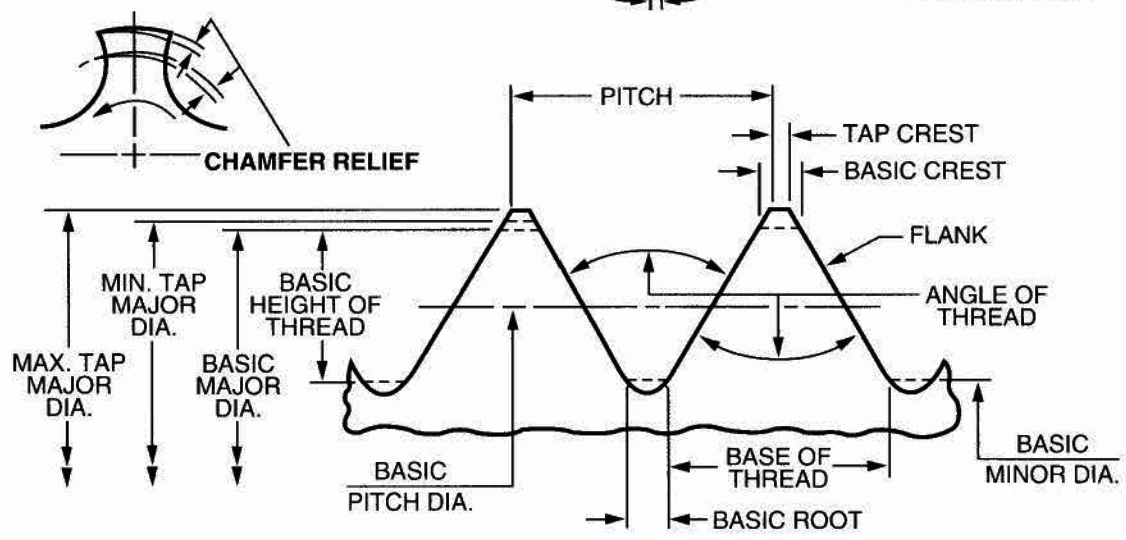
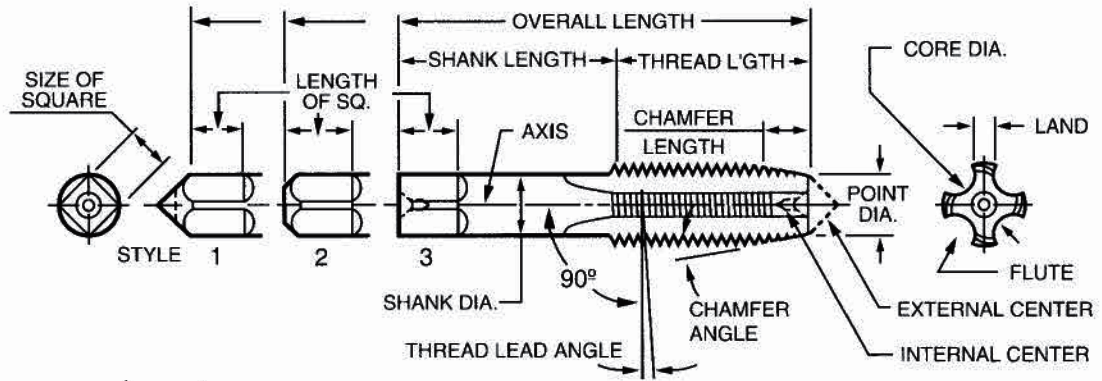
NOMINAL SIZE INCHES	DIMENSIONS IN INCHES				
	LENGTH OVERALL A	LENGTH OF THREAD B	LENGTH OF SQUARE C	DIAMETER OF SHANK D	SIZE OF SQUARE E
1/16	2 1/8	11/16	3/8	.3125	.234
1/8 Small Shank	2 1/8	3/4	3/8	.3125	.234
1/8 Large Shank	2 1/8	3/4	3/8	.4375	.328
1/4	2 7/16	1 1/16	7/16	.5625	.421
3/8	2 9/16	1 1/16	1/2	.7000	.531
1/2	3 1/8	1 3/8	5/8	.6875	.515
3/4	3 1/4	1 3/8	11/16	.9063	.679
1	3 3/4	1 3/4	13/16	1.1250	.843
1 1/4	4	1 3/4	15/16	1.3125	.984
1 1/2	4 1/4	1 3/4	1	1.5000	1.125
2	4 1/2	1 3/4	1 1/8	1.8750	1.406
2 1/2	5 1/2	2 9/16	1 1/4	2.2500	1.687
3	6	2 5/8	1 3/8	2.6250	1.968
3 1/2	6 1/2	2 11/16	1 1/2	2.8125	2.108
4	6 3/4	2 3/4	1 5/8	3.0000	2.250

TAPER PIPE TAPS THREAD LIMITS

NOMINAL SIZE INCHES	THREADS PER INCH	STANDARD PROJECTION NPT & NPTF			PTF SAE SHORT PROJECTION		
		PROJECTION THROUGH L1 RING GAGE	THICKNESS OF L1 RING GAGE	RUN OF THREAD	PROJECTION THROUGH L1 RING GAGE	THICKNESS OF L1 RING GAGE	RUN OF THREAD
1/16	27	.312	.160	.472	.2405±.019	.160	.4005
1/8	27	.312	.1615	.4735	.2405±.019	.1615	.4020
1/4	18	.459	.2278	.6868	.3610±.028	.2278	.5888
3/8	18	.454	.240	.694	.3610±.028	.240	.6010
1/2	14	.579	.320	.899	.4645±.036	.320	.7845
3/4	14	.565	.339	.904	.4645±.036	.339	.8035
1	11 1/2	.678	.400	1.078	.5652±.044	.400	.9652
1 1/4	11 1/2	.686	.420	1.106	.5652±.044	.420	.9852
1 1/2	11 1/2	.699	.420	1.119	.5652±.044	.420	.9852
2	11 1/2	.667	.436	1.103	.5652±.044	.436	1.0012
2 1/2	8	.925	.682	1.607	.8125±.062	.682	1.4945
3	8	.925	.766	1.691	.8125±.062	.766	1.5785
3 1/2	8	.938	.821	1.759			
4	8	.950	.844	1.794			

Projection & Thickness L1 Ring Gage = Run
Gage Measurement in Inches

TAP NOMENCLATURE





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