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April, 2007

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Price List No. 39

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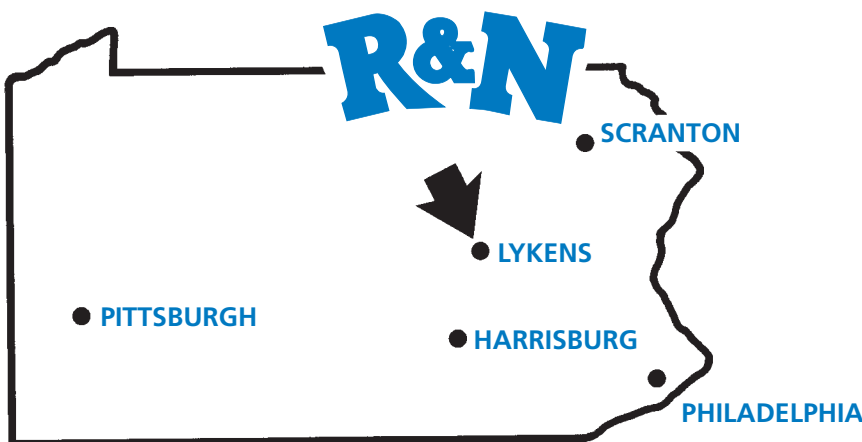


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## HAND TAPS MACHINE SCREW SIZES

TAP SIZE	SERIES DESIG.	NO. OF FLUTES	H LIMIT	106A				LIST PRICE		SET PRICE
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	SET EDP NUMBER	1-11	12+	
				LIST 106A						
0 - 80	NF	2	H-1	10011	10012	10013	10010	\$15.06	\$13.70	\$41.10
0 - 80	NF	2	H-2	10021	10022	10023	10020	15.06	13.70	41.10
1 - 64	NC	2	H-1	10111	10112	10113	10110	13.91	12.64	37.92
1 - 64	NC	2	H-2	10121	10122	10123	10120	13.91	12.64	37.92
1 - 72	NF	2	H-1	10211	10212	10213	10210	13.91	12.64	37.92
1 - 72	NF	2	H-2	10221	10222	10223	10220	13.91	12.64	37.92
2 - 56	NC	2	H-1	10311	10312	10313	10310	12.94	11.77	35.31
2 - 56	NC	2	H-2	10321	10322	10323	10320	12.94	11.77	35.31
2 - 56	NC	3	H-1	10411	10412	10413	10410	12.94	11.77	35.31
2 - 56	NC	3	H-2	10421	10422	10423	10420	12.94	11.77	35.31
2 - 64	NF	2	H-1	10511	10512	10513	10510	12.94	11.77	35.31
2 - 64	NF	2	H-2	10521	10522	10523	10520	12.94	11.77	35.31
2 - 64	NF	3	H-1	10611	10612	10613	10610	12.94	11.77	35.31
2 - 64	NF	3	H-2	10621	10622	10623	10620	12.94	11.77	35.31
3 - 48	NC	2	H-1	10711	10712	10713	10710	9.91	9.01	27.03
3 - 48	NC	2	H-2	10721	10722	10723	10720	9.91	9.01	27.03
3 - 48	NC	3	H-1	10811	10812	10813	10810	9.91	9.01	27.03
3 - 48	NC	3	H-2	10821	10822	10823	10820	9.91	9.01	27.03
3 - 56	NF	2	H-1	10911	10912	10913	10910	9.91	9.01	27.03
3 - 56	NF	2	H-2	10921	10922	10923	10920	9.91	9.01	27.03
3 - 56	NF	3	H-1	11011	11012	11013	11010	9.91	9.01	27.03
3 - 56	NF	3	H-2	11021	11022	11023	11020	9.91	9.01	27.03
4 - 40	NC	2	H-1	11311	11312	11313	11310	8.25	7.49	22.47
4 - 40	NC	2	H-2	11321	11322	11323	11320	8.25	7.49	22.47
4 - 40	NC	3	H-1	11411	11412	11413	11410	8.25	7.49	22.47
4 - 40	NC	3	H-2	11421	11422	11423	11420	8.25	7.49	22.47
4 - 48	NF	2	H-1	11511	11512	11513	11510	8.25	7.49	22.47
4 - 48	NF	2	H-2	11521	11522	11523	11520	8.25	7.49	22.47
4 - 48	NF	3	H-1	11611	11612	11613	11610	8.25	7.49	22.47
4 - 48	NF	3	H-2	11621	11622	11623	11620	8.25	7.49	22.47
4 - 36	NS	2	H-1	11111	11112	11113	11110	8.25	7.49	22.47
4 - 36	NS	2	H-2	11121	11122	11123	11120	8.25	7.49	22.47
4 - 36	NS	3	H-1	11211	11212	11213	11210	8.25	7.49	22.47
4 - 36	NS	3	H-2	11221	11222	11223	11220	8.25	7.49	22.47
5 - 40	NC	2	H-1	11711	11712	11713	11710	8.25	7.49	22.47
5 - 40	NC	2	H-2	11721	11722	11723	11720	8.25	7.49	22.47

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				LIST PRICE		SET PRICE
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	SET EDP NUMBER	1-11	12+	
5 - 40	NC	3	H-1	11811	11812	11813	11810	\$8.25	\$7.49	\$22.47
5 - 40	NC	3	H-2	11821	11822	11823	11820	8.25	7.49	22.47
5 - 44	NF	2	H-1	11911	11912	11913	11910	8.25	7.49	22.47
5 - 44	NF	2	H-2	11921	11922	11923	11920	8.25	7.49	22.47
5 - 44	NF	3	H-1	12011	12012	12013	12010	8.25	7.49	22.47
5 - 44	NF	3	H-2	12021	12022	12023	12020	8.25	7.49	22.47
6 - 32	NC	2	H-1	12111	12112	12113	12110	6.30	5.72	17.16
6 - 32	NC	2	H-2	12121	12122	12123	12120	6.30	5.72	17.16
6 - 32	NC	2	H-3	12131	12132	12133	12130	6.30	5.72	17.16
6 - 32	NC	3	H-1	12211	12212	12213	12210	6.30	5.72	17.16
6 - 32	NC	3	H-2	12221	12222	12223	12220	6.30	5.72	17.16
6 - 32	NC	3	H-3	12231	12232	12233	12230	6.30	5.72	17.16
6 - 40	NF	2	H-1	12311	12312	12313	12310	6.30	5.72	17.16
6 - 40	NF	2	H-2	12321	12322	12323	12320	6.30	5.72	17.16
6 - 40	NF	3	H-1	12411	12412	12413	12410	6.30	5.72	17.16
6 - 40	NF	3	H-2	12421	12422	12423	12420	6.30	5.72	17.16
8 - 32	NC	2	H-1	12511	12512	12513	12510	6.58	5.99	17.97
8 - 32	NC	2	H-2	12521	12522	12523	12520	6.58	5.99	17.97
8 - 32	NC	2	H-3	12531	12532	12533	12530	6.58	5.99	17.97
8 - 32	NC	3	H-1	12611	12612	12613	12610	6.58	5.99	17.97
8 - 32	NC	3	H-2	12621	12622	12623	12620	6.58	5.99	17.97
8 - 32	NC	3	H-3	12631	12632	12633	12630	6.58	5.99	17.97
8 - 32	NC	4	H-1	12711	12712	12713	12710	6.58	5.99	17.97
8 - 32	NC	4	H-2	12721	12722	12723	12720	6.58	5.99	17.97
8 - 32	NC	4	H-3	12731	12732	12733	12730	6.58	5.99	17.97
8 - 36	NF	2	H-1	12811	12812	12813	12810	6.58	5.99	17.97
8 - 36	NF	2	H-2	12821	12822	12823	12820	6.58	5.99	17.97
8 - 36	NF	3	H-1	12911	12912	12913	12910	6.58	5.99	17.97
8 - 36	NF	3	H-2	12921	12922	12923	12920	6.58	5.99	17.97
8 - 36	NF	4	H-1	13011	13012	13013	13010	6.58	5.99	17.97
8 - 36	NF	4	H-2	13021	13022	13023	13020	6.58	5.99	17.97
10 - 24	NC	2	H-1	13111	13112	13113	13110	6.71	6.10	18.30
10 - 24	NC	2	H-2	13121	13122	13123	13120	6.71	6.10	18.30
10 - 24	NC	2	H-3	13131	13132	13133	13130	6.71	6.10	18.30
10 - 24	NC	3	H-1	13211	13212	13213	13210	6.71	6.10	18.30
10 - 24	NC	3	H-2	13221	13222	13223	13220	6.71	6.10	18.30

## HAND TAPS MACHINE SCREW SIZES (CONTINUED)

LIST 106A

Taper  
Plug  
Bottom



TAP SIZE	SERIES DESIG.	NO. OF FLUTES	H LIMIT	106A				LIST PRICE		SET PRICE
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	SET EDP NUMBER	1-11	12+	
10 - 24	NC	3	H-3	13231	13232	13233	13230	\$6.71	\$6.10	\$18.30
10 - 24	NC	4	H-1	13311	13312	13313	13310	6.71	6.10	18.30
10 - 24	NC	4	H-2	13321	13322	13323	13320	6.71	6.10	18.30
10 - 24	NC	4	H-3	13331	13332	13333	13330	6.71	6.10	18.30
10 - 32	NF	2	H-1	13411	13412	13413	13410	6.71	6.10	18.30
10 - 32	NF	2	H-2	13421	13422	13423	13420	6.71	6.10	18.30
10 - 32	NF	2	H-3	13431	13432	13433	13430	6.71	6.10	18.30
10 - 32	NF	3	H-1	13511	13512	13513	13510	6.71	6.10	18.30
10 - 32	NF	3	H-2	13521	13522	13523	13520	6.71	6.10	18.30
10 - 32	NF	3	H-3	13531	13532	13533	13530	6.71	6.10	18.30
10 - 32	NF	4	H-1	13611	13612	13613	13610	6.71	6.10	18.30
10 - 32	NF	4	H-2	13621	13622	13623	13620	6.71	6.10	18.30
10 - 32	NF	4	H-3	13631	13632	13633	13630	6.71	6.10	18.30
12 - 24	NC	4	H-1	13711	13712	13713	13710	6.85	6.24	18.72
12 - 24	NC	4	H-3	13731	13732	13733	13730	6.85	6.24	18.72
12 - 28	NF	4	H-1	13811	13812	13813	13810	6.85	6.24	18.72
12 - 28	NF	4	H-3	13831	13832	13833	13830	6.85	6.24	18.72
14 - 20	NS	4	H-3	13931	13932	13933	13930	8.25	7.49	22.47
14 - 24	NS	4	H-3	14031	14032	14033	14030	8.25	7.49	22.47

**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.

## HAND TAPS FRACTIONAL SIZES

LIST 103

Taper  
Plug  
Bottom



TAP SIZE	SERIES DESIG.	NO. OF FLUTES	H LIMIT	103				LIST PRICE		SET PRICE
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	SET EDP NUMBER	1-11	12+	
1/4 - 20	NC	2	H-1		24012	24013		\$6.91	\$6.28	
1/4 - 20	NC	2	H-2	24021	24022	24023	24020	6.91	6.28	\$18.84
1/4 - 20	NC	2	H-3	24031	24032	24033	24030	6.91	6.28	18.84
1/4 - 20	NC	2	H-5		24052	24053		6.91	6.28	
1/4 - 20	NC	3	H-1	24111	24112	24113	24110	6.91	6.28	18.84
1/4 - 20	NC	3	H-2	24121	24122	24123	24120	6.91	6.28	18.84
1/4 - 20	NC	3	H-3	24131	24132	24133	24130	6.91	6.28	18.84
1/4 - 20	NC	3	H-5	24151	24152	24153	24150	6.91	6.28	18.84
1/4 - 20	NC	4	L-1	24291	24292	24293	24290	6.91	6.28	18.84
1/4 - 20	NC	4	H-1	24211	24212	24213	24210	6.91	6.28	18.84
1/4 - 20	NC	4	H-2	24221	24222	24223	24220	6.91	6.28	18.84
1/4 - 20	NC	4	H-3	24231	24232	24233	24230	6.91	6.28	18.84
1/4 - 20	NC	4	H-5	24251	24252	24253	24250	6.91	6.28	18.84
1/4 - 28	NF	2	H-1	24311	24312	24313	24310	6.91	6.28	18.84
1/4 - 28	NF	2	H-2	24321	24322	24323	24320	6.91	6.28	18.84
1/4 - 28	NF	2	H-3	24331	24332	24333	24330	6.91	6.28	18.84
1/4 - 28	NF	2	H-4	24341	24342	24343	24340	6.91	6.28	18.84
1/4 - 28	NF	3	H-1		24412			6.91	6.28	
1/4 - 28	NF	3	H-2	24421	24422	24423	24420	6.91	6.28	18.84
1/4 - 28	NF	3	H-3	24431	24432	24433	24430	6.91	6.28	18.84
1/4 - 28	NF	3	H-4	24441	24442	24443	24440	6.91	6.28	18.84
1/4 - 28	NF	4	H-1	24511	24512	24513	24510	6.91	6.28	18.84
1/4 - 28	NF	4	H-2	24521	24522	24523	24520	6.91	6.28	18.84
1/4 - 28	NF	4	H-3	24531	24532	24533	24530	6.91	6.28	18.84
1/4 - 28	NF	4	H-4	24541	24542	24543	24540	6.91	6.28	18.84
5/16 - 18	NC	2	H-1		24612	24613		7.99	7.27	
5/16 - 18	NC	2	H-2	24621	24622	24623	24620	7.99	7.27	21.81
5/16 - 18	NC	2	H-3	24631	24632	24633	24630	7.99	7.27	21.81
5/16 - 18	NC	2	H-5		24652	24653		7.99	7.27	
5/16 - 18	NC	3	H-1		24712			7.99	7.27	
5/16 - 18	NC	3	H-2		24722	24723		7.99	7.27	
5/16 - 18	NC	3	H-3	24731	24732	24733	24730	7.99	7.27	21.81
5/16 - 18	NC	3	H-5		24752	24753		7.99	7.27	
5/16 - 18	NC	4	L-1	24891	24892	24893	24890	7.99	7.27	21.81
5/16 - 18	NC	4	H-1	24811	24812	24813	24810	7.99	7.27	21.81
5/16 - 18	NC	4	H-2	24821	24822	24823	24820	7.99	7.27	21.81

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				LIST PRICE		SET PRICE
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	SET EDP NUMBER	1-11	12+	
5/16 - 18	NC	4	H-3	24831	24832	24833	24830	\$7.99	\$7.27	\$21.81
5/16 - 18	NC	4	H-5	24851	24852	24853	24850	7.99	7.27	21.81
5/16 - 24	NF	2	H-1		24912	24913		7.99	7.27	
5/16 - 24	NF	2	H-2		24922	24923		7.99	7.27	
5/16 - 24	NF	2	H-3	24931	24932	24933	24930	7.99	7.27	21.81
5/16 - 24	NF	2	H-4		24942	24943		7.99	7.27	
5/16 - 24	NF	3	H-1		25012	25013		7.99	7.27	
5/16 - 24	NF	3	H-2		25022	25023		7.99	7.27	
5/16 - 24	NF	3	H-3	25031	25032	25033	25030	7.99	7.27	21.81
5/16 - 24	NF	3	H-4	25041	25042	25043	25040	7.99	7.27	21.81
5/16 - 24	NF	4	H-1	25111	25112	25113	25110	7.99	7.27	21.81
5/16 - 24	NF	4	H-2	25121	25122	25123	25120	7.99	7.27	21.81
5/16 - 24	NF	4	H-3	25131	25132	25133	25130	7.99	7.27	21.81
5/16 - 24	NF	4	H-4	25141	25142	25143	25140	7.99	7.27	21.81
3/8 - 16	NC	3	H-1	25211	25212	25213	25210	9.18	8.34	25.02
3/8 - 16	NC	3	H-2	25221	25222	25223	25220	9.18	8.34	25.02
3/8 - 16	NC	3	H-3	25231	25232	25233	25230	9.18	8.34	25.02
3/8 - 16	NC	3	H-5	25251	25252	25253	25250	9.18	8.34	25.02
3/8 - 16	NC	4	L-1	25391	25392	25393	25390	9.18	8.34	25.02
3/8 - 16	NC	4	H-1	25311	25312	25313	25310	9.18	8.34	25.02
3/8 - 16	NC	4	H-2	25321	25322	25323	25320	9.18	8.34	25.02
3/8 - 16	NC	4	H-3	25331	25332	25333	25330	9.18	8.34	25.02
3/8 - 16	NC	4	H-5	25351	25352	25353	25350	9.18	8.34	25.02
3/8 - 24	NF	3	H-1		25412			9.18	8.34	
3/8 - 24	NF	3	H-2	25421	25422	25423	25420	9.18	8.34	25.02
3/8 - 24	NF	3	H-3	25431	25432	25433	25430	9.18	8.34	25.02
3/8 - 24	NF	3	H-4		25442	25443		9.18	8.34	
3/8 - 24	NF	4	H-1	25511	25512	25513	25510	9.18	8.34	25.02
3/8 - 24	NF	4	H-2	25521	25522	25523	25520	9.18	8.34	25.02
3/8 - 24	NF	4	H-3	25531	25532	25533	25530	9.18	8.34	25.02
3/8 - 24	NF	4	H-4	25541	25542	25543	25540	9.18	8.34	25.02
7/16 - 14	NC	3	H-1		25612	25613		14.45	13.14	
7/16 - 14	NC	3	H-2		25622	25623		14.45	13.14	
7/16 - 14	NC	3	H-3	25631	25632	25633	25630	14.45	13.14	39.42
7/16 - 14	NC	3	H-5	25651	25652	25653	25650	14.45	13.14	39.42
7/16 - 14	NC	4	L-1	25791	25792	25793	25790	14.45	13.14	39.42

**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 (CONTINUED)

LIST 103

Taper  
Plug  
Bottom



TAP SIZE	SERIES DESIG.	NO. OF FLUTES	H LIMIT	103				LIST PRICE		SET PRICE
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	SET EDP NUMBER	1-11	12+	
7/16 - 14	NC	4	H-1	25711	25712	25713	25710	\$14.45	\$13.14	\$39.42
7/16 - 14	NC	4	H-2	25721	25722	25723	25720	14.45	13.14	39.42
7/16 - 14	NC	4	H-3	25731	25732	25733	25730	14.45	13.14	39.42
7/16 - 14	NC	4	H-5	25751	25752	25753	25750	14.45	13.14	39.42
7/16 - 20	NF	3	H-1		25812			14.45	13.14	
7/16 - 20	NF	3	H-2		25822			14.45	13.14	
7/16 - 20	NF	3	H-3	25831	25832	25833	25830	14.45	13.14	39.42
7/16 - 20	NF	3	H-5		25852	25853		14.45	13.14	
7/16 - 20	NF	4	H-1	25911	25912	25913	25910	14.45	13.14	39.42
7/16 - 20	NF	4	H-2	25921	25922	25923	25920	14.45	13.14	39.42
7/16 - 20	NF	4	H-3	25931	25932	25933	25930	14.45	13.14	39.42
7/16 - 20	NF	4	H-5	25951	25952	25953	25950	14.45	13.14	39.42
1/2 - 13	NC	3	H-1	26011	26012	26013	26010	18.14	16.49	49.47
1/2 - 13	NC	3	H-2	26021	26022	26023	26020	18.14	16.49	49.47
1/2 - 13	NC	3	H-3	26031	26032	26033	26030	18.14	16.49	49.47
1/2 - 13	NC	3	H-5	26051	26052	26053	26050	18.14	16.49	49.47
1/2 - 13	NC	4	L-1	26191	26192	26193	26190	18.14	16.49	49.47
1/2 - 13	NC	4	H-1	26111	26112	26113	26110	18.14	16.49	49.47
1/2 - 13	NC	4	H-2	26121	26122	26123	26120	18.14	16.49	49.47
1/2 - 13	NC	4	H-3	26131	26132	26133	26130	18.14	16.49	49.47
1/2 - 13	NC	4	H-5	26151	26152	26153	26150	18.14	16.49	49.47
1/2 - 20	NF	3	H-1		26212			18.14	16.49	
1/2 - 20	NF	3	H-2	26221	26222	26223	26220	18.14	16.49	49.47
1/2 - 20	NF	3	H-3	26231	26232	26233	26230	18.14	16.49	49.47
1/2 - 20	NF	3	H-5	26251	26252	26253	26250	18.14	16.49	49.47
1/2 - 20	NF	4	H-1	26311	26312	26313	26310	18.14	16.49	49.47
1/2 - 20	NF	4	H-2	26321	26322	26323	26320	18.14	16.49	49.47
1/2 - 20	NF	4	H-3	26331	26332	26333	26330	18.14	16.49	49.47
1/2 - 20	NF	4	H-5	26351	26352	26353	26350	18.14	16.49	49.47

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				LIST PRICE		SET PRICE
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	SET EDP NUMBER	1-2	3+	
9/16 - 12	NC	4	H-1	26411	26412	26413	26410	\$25.14	\$22.85	\$68.55
9/16 - 12	NC	4	H-2	26421	26422	26423	26420	25.14	22.85	68.55
9/16 - 12	NC	4	H-3	26431	26432	26433	26430	25.14	22.85	68.55
9/16 - 12	NC	4	H-5	26451	26452	26453	26450	25.14	22.85	68.55
9/16 - 18	NF	4	H-1	26511	26512	26513	26510	25.14	22.85	68.55
9/16 - 18	NF	4	H-2	26521	26522	26523	26520	25.14	22.85	68.55
9/16 - 18	NF	4	H-3	26531	26532	26533	26530	25.14	22.85	68.55
9/16 - 18	NF	4	H-5	26551	26552	26553	26550	25.14	22.85	68.55
5/8 - 11	NC	4	H-1	26611	26612	26613	26610	32.06	29.14	87.42
5/8 - 11	NC	4	H-2	26621	26622	26623	26620	32.06	29.14	87.42
5/8 - 11	NC	4	H-3	26631	26632	26633	26630	32.06	29.14	87.42
5/8 - 11	NC	4	H-5	26651	26652	26653	26650	32.06	29.14	87.42
5/8 - 18	NF	4	H-1	26711	26712	26713	26710	32.06	29.14	87.42
5/8 - 18	NF	4	H-2	26721	26722	26723	26720	32.06	29.14	87.42
5/8 - 18	NF	4	H-3	26731	26732	26733	26730	32.06	29.14	87.42
5/8 - 18	NF	4	H-5	26751	26752	26753	26750	32.06	29.14	87.42
11/16 - 11	NS	4	H-3	26831	26832	26833	26830	37.82	34.37	103.11
11/16 - 16	NS	4	H-3	26931	26932	26933	26930	37.82	34.37	103.11
3/4 - 10	NC	4	H-1	27011	27012	27013	27010	45.12	41.02	123.06
3/4 - 10	NC	4	H-2	27021	27022	27023	27020	45.12	41.02	123.06
3/4 - 10	NC	4	H-3	27031	27032	27033	27030	45.12	41.02	123.06
3/4 - 10	NC	4	H-5	27051	27052	27053	27050	45.12	41.02	123.06
3/4 - 16	NF	4	H-1	27111	27112	27113	27110	45.12	41.02	123.06
3/4 - 16	NF	4	H-2	27121	27122	27123	27120	45.12	41.02	123.06
3/4 - 16	NF	4	H-3	27131	27132	27133	27130	45.12	41.02	123.06
3/4 - 16	NF	4	H-5	27151	27152	27153	27150	45.12	41.02	123.06
7/8 - 9	NC	4	H-1	27211	27212	27213	27210	62.50	56.82	170.46
7/8 - 9	NC	4	H-2	27221	27222	27223	27220	62.50	56.82	170.46
7/8 - 9	NC	4	H-4	27241	27242	27243	27240	62.50	56.82	170.46
7/8 - 9	NC	4	H-6	27261	27262	27263	27260	62.50	56.82	170.46
7/8 - 14	NF	4	H-1	27311	27312	27313	27310	62.50	56.82	170.46
7/8 - 14	NF	4	H-2	27321	27322	27323	27320	62.50	56.82	170.46
7/8 - 14	NF	4	H-4	27341	27342	27343	27340	62.50	56.82	170.46
7/8 - 14	NF	4	H-6	27361	27362	27363	27360	62.50	56.82	170.46
1 - 8	NC	4	H-1	27411	27412	27413	27410	83.67	76.06	228.18
1 - 8	NC	4	H-2	27421	27422	27423	27420	83.67	76.06	228.18
1 - 8	NC	4	H-4	27441	27442	27443	27440	83.67	76.06	228.18
1 - 8	NC	4	H-6	27461	27462	27463	27460	83.67	76.06	228.18
1 - 12	NF	4	H-1	27511	27512	27513	27510	83.67	76.06	228.18
1 - 12	NF	4	H-2	27521	27522	27523	27520	83.67	76.06	228.18

## HAND TAPS FRACTIONAL SIZES (CONTINUED)

LIST 103

Taper  
Plug  
Bottom



TAP SIZE	SERIES DESIG.	NO. OF FLUTES	H LIMIT	103				LIST PRICE		SET PRICE
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	SET EDP NUMBER	1-2	3+	
1 - 12	NF	4	H-4	27541	27542	27543	27540	\$83.67	\$76.06	\$228.18
1 - 12	NF	4	H-6	27561	27562	27563	27560	83.67	76.06	228.18
1 - 14	NS	4	H-1	27611	27612	27613	27610	83.67	76.06	228.18
1 - 14	NS	4	H-2	27621	27622	27623	27620	83.67	76.06	228.18
1 - 14	NS	4	H-4	27641	27642	27643	27640	83.67	76.06	228.18
1 - 14	NS	4	H-6	27661	27662	27663	27660	83.67	76.06	228.18
								LIST PRICE 1 OR MORE		SET PRICE
1 1/8 - 7	NC	4	H-4	27741	27742	27743	27740	112.67		338.01
1 1/8 - 7	NC	4	H-8	27781	27782	27783	27780	112.67		338.01
1 1/8 - 12	NF	4	H-4	27841	27842	27843	27840	112.67		338.01
1 1/8 - 12	NF	4	H-6	27861	27862	27863	27860	112.67		338.01
1 1/4 - 7	NC	4	H-4	27941	27942	27943	27940	144.38		433.14
1 1/4 - 7	NC	4	H-8	27981	27982	27983	27980	144.38		433.14
1 1/4 - 12	NF	6	H-4	28041	28042	28043	28040	144.38		433.14
1 1/4 - 12	NF	6	H-6	28061	28062	28063	28060	144.38		433.14
1 3/8 - 6	NC	4	H-4	28141	28142	28143	28140	180.68		542.04
1 3/8 - 6	NC	4	H-8	28181	28182	28183	28180	180.68		542.04
1 3/8 - 12	NF	6	H-4	28241	28242	28243	28240	180.68		542.04
1 3/8 - 12	NF	6	H-6	28261	28262	28263	28260	180.68		542.04
1 1/2 - 6	NC	4	H-4	28341	28342	28343	28340	223.08		669.24
1 1/2 - 6	NC	4	H-8	28381	28382	28383	28380	223.08		669.24
1 1/2 - 12	NF	6	H-4	28441	28442	28443	28440	223.08		669.24
1 1/2 - 12	NF	6	H-6	28461	28462	28463	28460	223.08		669.24

**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 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			LIST PRICE
					TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	
1 1/16 - 12	NS	4	302	H-4	90011	90012	90013	\$129.34
1 1/8 - 8	8N	4	302	H-4	90041	90042	90043	112.67
1 3/16 - 12	NS	6	302	H-4	90081	90082	90083	144.38
1 1/4 - 8	8N	4	302	H-4	90141	90142	90143	144.38
1 5/16 - 12	NS	6	302	H-4	90241	90242	90243	167.75
1 3/8 - 8	8N	4	302	H-4	90341	90342	90343	180.68
1 1/2 - 8	8N	4	302	H-4	90441	90442	90443	223.08
1 5/8 - 5 1/2	NS	6	302	G331 H-7	90571	90572	90573	291.97
1 5/8 - 8	8N	6	302	G331 H-6	90521	90522	90523	291.97
1 5/8 - 12	12N	6	303	G331 H-6	90561	90562	90563	226.78
1 3/4 - 5	NC	6	302	G331 H-7	90621	90622	90623	320.43
1 3/4 - 8	8N	6	302	G331 H-6	90761	90762	90763	320.43
1 3/4 - 12	12N	6	303	G331 H-6	90961	90962	90963	251.75
1 7/8 - 5	NS	6	302	G331 H-7	91071	91072	91073	382.61
1 7/8 - 8	8N	6	302	G331 H-6	91161	91162	91163	382.61
1 7/8 - 12	12N	6	303	G331 H-6	91261	91262	91263	277.21
2 - 4 1/2	NC	6	302	G331 H-7	90821	90822	90823	411.16
2 - 8	8N	6	302	G331 H-6	91361	91362	91363	411.16
2 - 12	12N	6	303	G331 H-6	91461	91462	91463	303.16

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		LIST PRICE	
			H-3	H-4	1-11	12+
6 - 32	NC	3	12235		\$6.30	\$5.72
8 - 32	NC	4	12735		6.58	5.99
10 - 24	NC	4	13335		6.71	6.10
10 - 32	NF	4	13635		6.71	6.10
12 - 24	NC	4	13735		6.85	6.24
12 - 28	NF	4	13835		6.85	6.24
1/4 - 20	NC	4	24235		6.91	6.28
1/4 - 28	NF	4	24535		6.91	6.28
5/16 - 18	NC	4	24835		7.99	7.27
5/16 - 24	NF	4	25135		7.99	7.27
3/8 - 16	NC	4	25335		9.18	8.34
3/8 - 24	NF	4	25535		9.18	8.34
7/16 - 14	NC	4	25735		14.45	13.14
7/16 - 20	NF	4	25935		14.45	13.14
1/2 - 13	NC	4	26135		18.14	16.49
1/2 - 20	NF	4	26335		18.14	16.49
					LIST PRICE	
					1-2	3+
9/16 - 12	NC	4	26435		25.14	22.85
9/16 - 18	NF	4	26535		25.14	22.85
5/8 - 11	NC	4	26635		32.06	29.14
5/8 - 18	NF	4	26735		32.06	29.14
3/4 - 10	NC	4	27035		45.12	41.02
3/4 - 16	NF	4	27135		45.12	41.02
7/8 - 9	NC	4		27245	62.50	56.82
7/8 - 14	NF	4		27345	62.50	56.82
1 - 8	NC	4		27445	83.67	76.06
1 - 12	NF	4		27545	83.67	76.06
1 - 14	NS	4		27645	83.67	76.06

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			LIST PRICE	
				H-1	H-2	H-3	1-11	12+
0 - 80	NF	2	SPPT PLUG	14112	14122		\$16.66	\$15.15
0 - 80	NF	2	SPPT BOTT	14113	14123		16.66	15.15
1 - 64	NC	2	SPPT PLUG	14212	14222		15.29	13.90
1 - 64	NC	2	SPPT BOTT	14213	14223		15.29	13.90
1 - 72	NF	2	SPPT PLUG	14312	14322		15.29	13.90
1 - 72	NF	2	SPPT BOTT	14313	14323		15.29	13.90
2 - 56	NC	2	SPPT PLUG	14412	14422		14.32	13.03
2 - 56	NC	2	SPPT BOTT	14413	14423		14.32	13.03
2 - 64	NF	2	SPPT PLUG	14512	14522		14.32	13.03
2 - 64	NF	2	SPPT BOTT	14513	14523		14.32	13.03
3 - 48	NC	2	SPPT PLUG	14612	14622		11.41	10.36
3 - 48	NC	2	SPPT BOTT	14613	14623		11.41	10.36
3 - 56	NF	2	SPPT PLUG	14712	14722		11.41	10.36
3 - 56	NF	2	SPPT BOTT	14713	14723		11.41	10.36
4 - 40	NC	2	SPPT PLUG	14912	14922		9.43	8.57
4 - 40	NC	2	SPPT BOTT	14913	14923		9.43	8.57
4 - 48	NF	2	SPPT PLUG	15012	15022		9.43	8.57
4 - 48	NF	2	SPPT BOTT	15013	15023		9.43	8.57
4 - 36	NS	2	SPPT PLUG	14812	14822		9.43	8.57
4 - 36	NS	2	SPPT BOTT	14813	14823		9.43	8.57
5 - 40	NC	2	SPPT PLUG	15112	15122		9.43	8.57
5 - 40	NC	2	SPPT BOTT	15113	15123		9.43	8.57
5 - 44	NF	2	SPPT PLUG	15212	15222		9.43	8.57
5 - 44	NF	2	SPPT BOTT	15213	15223		9.43	8.57
6 - 32	NC	2	SPPT PLUG	15312	15322	15332	7.12	6.47
6 - 32	NC	2	SPPT BOTT	15313	15323	15333	7.12	6.47
6 - 40	NF	2	SPPT PLUG	15412	15422		7.12	6.47
6 - 40	NF	2	SPPT BOTT	15413	15423		7.12	6.47
8 - 32	NC	2	SPPT PLUG	15512	15522	15532	7.40	6.72
8 - 32	NC	2	SPPT BOTT	15513	15523	15533	7.40	6.72
8 - 36	NF	2	SPPT PLUG	15612	15622	15632	7.40	6.72
8 - 36	NF	2	SPPT BOTT	15613	15623	15633	7.40	6.72
10 - 24	NC	2	SPPT PLUG	15712	15722	15732	7.66	6.97
10 - 24	NC	2	SPPT BOTT	15713	15723	15733	7.66	6.97
10 - 32	NF	2	SPPT PLUG	15812	15822	15832	7.66	6.97
10 - 32	NF	2	SPPT BOTT	15813	15823	15833	7.66	6.97
12 - 24	NC	2	SPPT PLUG	15912		15932	7.73	7.03
12 - 24	NC	2	SPPT BOTT	15913		15933	7.73	7.03
12 - 28	NF	2	SPPT PLUG	16012		16032	7.73	7.03
12 - 28	NF	2	SPPT BOTT	16013		16033	7.73	7.03
14 - 20	NS	2	SPPT PLUG			16132	9.43	8.57
14 - 24	NS	2	SPPT PLUG			16232	9.43	8.57

## SPIRAL POINT TAPS FRACTIONAL SIZES

LIST 102C

Spiral Point Plug  
Spiral Point Bottom



TAP SIZE	SERIES DESIG.	NO. OF FLUTES	STYLE	EDP NUMBER						LIST PRICE	
				L-1	H-1	H-2	H-3	H-4	H-5	1-11	12+
1/4 - 20	NC	2	SPPT PLUG	32592	32512	32522	32532		32552	\$7.77	\$7.06
1/4 - 20	NC	2	SPPT BOTT				32533			7.77	7.06
1/4 - 20	NC	3	SPPT PLUG		32612	32622	32632		32652	7.77	7.06
1/4 - 20	NC	3	SPPT BOTT				32633			7.77	7.06
1/4 - 28	NF	2	SPPT PLUG		32712	32722	32732	32742		7.77	7.06
1/4 - 28	NF	2	SPPT BOTT				32733			7.77	7.06
1/4 - 28	NF	3	SPPT PLUG		32812	32822	32832	32842		7.77	7.06
1/4 - 28	NF	3	SPPT BOTT				32833			7.77	7.06
5/16 - 18	NC	2	SPPT PLUG	32992	32912	32922	32932		32952	9.11	8.29
5/16 - 18	NC	2	SPPT BOTT				32933			9.11	8.29
5/16 - 18	NC	3	SPPT PLUG		33012	33022	33032		33052	9.11	8.29
5/16 - 18	NC	3	SPPT BOTT				33033			9.11	8.29
5/16 - 24	NF	2	SPPT PLUG		33112	33122	33132	33142		9.11	8.29
5/16 - 24	NF	2	SPPT BOTT				33133			9.11	8.29
5/16 - 24	NF	3	SPPT PLUG		33212	33222	33232	33242		9.11	8.29
5/16 - 24	NF	3	SPPT BOTT				33233			9.11	8.29
3/8 - 16	NC	3	SPPT PLUG	33392	33312	33322	33332		33352	10.59	9.63
3/8 - 16	NC	3	SPPT BOTT				33333			10.59	9.63
3/8 - 24	NF	3	SPPT PLUG		33412	33422	33432	33442		10.59	9.63
3/8 - 24	NF	3	SPPT BOTT				33433			10.59	9.63
7/16 - 14	NC	3	SPPT PLUG	33592	33512	33522	33532		33552	16.50	15.00
7/16 - 14	NC	3	SPPT BOTT				33533			16.50	15.00
7/16 - 20	NF	3	SPPT PLUG		33612	33622	33632		33652	16.50	15.00
7/16 - 20	NF	3	SPPT BOTT				33633			16.50	15.00
1/2 - 13	NC	3	SPPT PLUG	33792	33712	33722	33732		33752	20.55	18.68
1/2 - 13	NC	3	SPPT BOTT				33733			20.55	18.68
1/2 - 20	NF	3	SPPT PLUG		33812	33822	33832		33852	20.55	18.68
1/2 - 20	NF	3	SPPT BOTT				33833			20.55	18.68
										LIST PRICE	
										1-5	6+
9/16 - 12	NC	3	SPPT PLUG		33912	33922	33932		33952	27.44	24.95
9/16 - 12	NC	3	SPPT BOTT				33933			27.44	24.95
9/16 - 18	NF	3	SPPT PLUG		34012	34022	34032		34052	27.44	24.95
9/16 - 18	NF	3	SPPT BOTT				34033			27.44	24.95
5/8 - 11	NC	3	SPPT PLUG		34112	34122	34132		34152	34.38	31.25
5/8 - 11	NC	3	SPPT BOTT				34133			34.38	31.25
5/8 - 18	NF	3	SPPT PLUG		34212	34222	34232		34252	34.38	31.25
5/8 - 18	NF	3	SPPT BOTT				34233			34.38	31.25
11/16 - 11	NS	3	SPPT PLUG				34332			40.13	36.49
11/16 - 11	NS	3	SPPT BOTT				34333			40.13	36.49
11/16 - 16	NS	3	SPPT PLUG				34432			40.13	36.49
11/16 - 16	NS	3	SPPT BOTT				34433			40.13	36.49
3/4 - 10	NC	3	SPPT PLUG		34512	34522	34532		34552	47.45	43.14
3/4 - 10	NC	3	SPPT BOTT				34533			47.45	43.14
3/4 - 16	NF	3	SPPT PLUG		34612	34622	34632		34652	47.45	43.14
3/4 - 16	NF	3	SPPT BOTT				34633			47.45	43.14
7/8 - 9	NC	3	SPPT PLUG					34852		75.45	68.60
7/8 - 9	NC	4	SPPT PLUG					34842		75.45	68.60
7/8 - 14	NF	3	SPPT PLUG					34952		75.45	68.60
7/8 - 14	NF	4	SPPT PLUG					34942		75.45	68.60
1 - 8	NC	3	SPPT PLUG					35052		96.59	87.81
1 - 8	NC	4	SPPT PLUG					35042		96.59	87.81
1 - 12	NF	4	SPPT PLUG					35142		96.59	87.81
1 - 14	NS	4	SPPT PLUG					35242		96.59	87.81

## 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		LIST PRICE
			H-2	H-3	
<b>MACHINE SCREW SIZES</b>					
0 - 80	NF	2	99674		POA
2 - 56	NC	2	99675		POA
3 - 48	NC	2	99676		POA
3 - 56	NF	2	99677		POA
4 - 40	NC	2	99513		POA
4 - 48	NF	2	99514		POA
5 - 40	NC	2	99515		POA
5 - 44	NF	2	99516		POA
6 - 32	NC	2	99517	99518	POA
6 - 40	NF	2	99519		POA
8 - 32	NC	2	99520	99521	POA
8 - 36	NF	2	99522		POA
10 - 24	NC	2	99523	99524	POA
10 - 32	NF	2	99525	99526	POA
12 - 24	NC	2		99527	POA
12 - 28	NF	2		99528	POA
<b>FRACTIONAL SIZES</b>					
1/4 - 20	NC	2	99529	99530	POA
1/4 - 20	NC	3	99531	99532	POA
1/4 - 28	NF	2	99533	99534	POA
1/4 - 28	NF	3	99535	99536	POA
5/16 - 18	NC	2	99537	99538	POA
5/16 - 18	NC	3	99539	99540	POA
5/16 - 24	NF	2	99541		POA
5/16 - 24	NF	3		99543	POA
3/8 - 16	NC	3	99544	99545	POA
3/8 - 24	NF	3	99546	99547	POA
7/16 - 14	NC	3		99548	POA
7/16 - 20	NF	3		99549	POA
1/2 - 13	NC	3		99550	POA
1/2 - 20	NF	3		99551	POA
9/16 - 12	NC	3		99552	POA
9/16 - 18	NF	3		99553	POA
5/8 - 11	NC	3		99554	POA
5/8 - 18	NF	3		99555	POA
3/4 - 10	NC	3		99556	POA
3/4 - 16	NF	3		99557	POA

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			LIST PRICE	
				H-1	H-2	H-3	1-11	12+
3 - 48	NC	2	PLUG	18512	18522		\$17.53	\$15.94
3 - 48	NC	2	BOTT	18513	18523		17.53	15.94
3 - 56	NF	2	PLUG	18612	18622		17.53	15.94
3 - 56	NF	2	BOTT	18613	18623		17.53	15.94
4 - 40	NC	2	PLUG	18712	18722		14.70	13.36
4 - 40	NC	2	BOTT	18713	18723		14.70	13.36
4 - 48	NF	2	PLUG	18812	18822		14.70	13.36
4 - 48	NF	2	BOTT	18813	18823		14.70	13.36
5 - 40	NC	2	PLUG	18912	18922		14.70	13.36
5 - 40	NC	2	BOTT	18913	18923		14.70	13.36
5 - 44	NF	2	PLUG	19012	19022		14.70	13.36
5 - 44	NF	2	BOTT	19013	19023		14.70	13.36
6 - 32	NC	2	PLUG	19112		19132	11.67	10.61
6 - 32	NC	2	BOTT	19113		19133	11.67	10.61
6 - 40	NF	2	PLUG	19212	19222		11.67	10.61
6 - 40	NF	2	BOTT	19213	19223		11.67	10.61
8 - 32	NC	2	PLUG	19312		19332	11.67	10.61
8 - 32	NC	2	BOTT	19313		19333	11.67	10.61
8 - 36	NF	2	PLUG	19412	19422		11.67	10.61
8 - 36	NF	2	BOTT	19413	19423		11.67	10.61
10 - 24	NC	2	PLUG	19512		19532	11.67	10.61
10 - 24	NC	2	BOTT	19513		19533	11.67	10.61
10 - 32	NF	2	PLUG	19612		19632	11.67	10.61
10 - 32	NF	2	BOTT	19613		19633	11.67	10.61
12 - 24	NC	2	PLUG	19712		19732	11.77	10.70
12 - 24	NC	2	BOTT	19713		19733	11.77	10.70
12 - 28	NF	2	PLUG	19812		19832	11.77	10.70
12 - 28	NF	2	BOTT	19813		19833	11.77	10.70

**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, 407VP and 407VMR.

## SLOW SPIRAL FLUTED 30° FRACTIONAL TAPS

LIST 106S

Plug Bottom



TAP SIZE	SERIES DESIGN.	NO. OF FLUTES	STYLE	EDP NUMBER			LIST PRICE	
				H-1	H-3	H-5	1-11	12+
1/4 - 20	NC	2	PLUG	29012	29032	29052	\$12.55	\$11.41
1/4 - 20	NC	2	BOTT	29013	29033	29053	12.55	11.41
1/4 - 20	NC	3	PLUG	29112	29132	29152	12.55	11.41
1/4 - 20	NC	3	BOTT	29113	29133	29153	12.55	11.41
1/4 - 28	NF	2	PLUG	29212	29232		12.55	11.41
1/4 - 28	NF	2	BOTT	29213	29233		12.55	11.41
1/4 - 28	NF	3	PLUG	29312	29332		12.55	11.41
1/4 - 28	NF	3	BOTT	29313	29333		12.55	11.41
5/16 - 18	NC	2	PLUG	29412	29432	29452	13.87	12.61
5/16 - 18	NC	2	BOTT	29413	29433	29453	13.87	12.61
5/16 - 18	NC	3	PLUG	29512	29532	29552	13.87	12.61
5/16 - 18	NC	3	BOTT	29513	29533	29553	13.87	12.61
5/16 - 24	NF	2	PLUG	29612	29632		13.87	12.61
5/16 - 24	NF	2	BOTT	29613	29633		13.87	12.61
5/16 - 24	NF	3	PLUG	29712	29732		13.87	12.61
5/16 - 24	NF	3	BOTT	29713	29733		13.87	12.61
3/8 - 16	NC	3	PLUG	29812	29832	29852	16.19	14.72
3/8 - 16	NC	3	BOTT	29813	29833	29853	16.19	14.72
3/8 - 24	NF	3	PLUG	29912	29932		16.19	14.72
3/8 - 24	NF	3	BOTT	29913	29933		16.19	14.72
7/16 - 14	NC	3	PLUG	30012	30032	30052	25.31	23.01
7/16 - 14	NC	3	BOTT	30013	30033	30053	25.31	23.01
7/16 - 20	NF	3	PLUG	30112	30132	30152	25.31	23.01
7/16 - 20	NF	3	BOTT	30113	30133	30153	25.31	23.01
1/2 - 13	NC	3	PLUG	30212	30232	30252	30.22	27.48
1/2 - 13	NC	3	BOTT	30213	30233	30253	30.22	27.48
1/2 - 20	NF	3	PLUG	30312	30332	30352	30.22	27.48
1/2 - 20	NF	3	BOTT	30313	30333	30353	30.22	27.48
							LIST PRICE	
							1-2	3+
9/16 - 12	NC	3	PLUG		30362		50.48	45.88
9/16 - 12	NC	3	BOTT		30363		50.48	45.88
9/16 - 18	NF	3	PLUG		30367		50.48	45.88
9/16 - 18	NF	3	BOTT		30368		50.48	45.88
5/8 - 11	NC	3	PLUG		30372		61.35	55.77
5/8 - 11	NC	3	BOTT		30373		61.35	55.77
5/8 - 18	NF	3	PLUG		30382		61.35	55.77
5/8 - 18	NF	3	BOTT		30383		61.35	55.77
3/4 - 10	NC	4	PLUG		30392		80.44	73.13
3/4 - 10	NC	4	BOTT		30393		80.44	73.13
3/4 - 16	NF	4	PLUG		30397		80.44	73.13
3/4 - 16	NF	4	BOTT		30398		80.44	73.13

## HEAVY DUTY SPIRAL FLUTED 45° MACHINE SCREW TAPS

LIST 101HD

Plug  
Bottom



TAP SIZE	SERIES DESIGN.	NO. OF FLUTES	STYLE	EDP NUMBER			LIST PRICE	
				H-1	H-2	H-3	1-11	12+
3 - 48	NC	2	PLUG	64001	64002		\$17.53	\$15.94
3 - 48	NC	2	BOTT	64003	64004		17.53	15.94
3 - 56	NF	2	PLUG	64011	64012		17.53	15.94
3 - 56	NF	2	BOTT	64013	64014		17.53	15.94
4 - 40	NC	2	PLUG	64021	64022		14.70	13.36
4 - 40	NC	2	BOTT	64023	64024		14.70	13.36
4 - 48	NF	2	PLUG	64031	64032		14.70	13.36
4 - 48	NF	2	BOTT	64033	64034		14.70	13.36
5 - 40	NC	2	PLUG	64041	64042		14.70	13.36
5 - 40	NC	2	BOTT	64043	64044		14.70	13.36
5 - 44	NF	2	PLUG	64051	64052		14.70	13.36
5 - 44	NF	2	BOTT	64053	64054		14.70	13.36
6 - 32	NC	2	PLUG	64061		64062	11.67	10.61
6 - 32	NC	2	BOTT	64063		64064	11.67	10.61
6 - 40	NF	2	PLUG	64071	64072		11.67	10.61
6 - 40	NF	2	BOTT	64073	64074		11.67	10.61
8 - 32	NC	2	PLUG	64081		64082	11.67	10.61
8 - 32	NC	2	BOTT	64083		64084	11.67	10.61
8 - 36	NF	2	PLUG	64091	64092		11.67	10.61
8 - 36	NF	2	BOTT	64093	64094		11.67	10.61
10 - 24	NC	3	PLUG	64101		64102	11.67	10.61
10 - 24	NC	3	BOTT	64103		64104	11.67	10.61
10 - 32	NF	3	PLUG	64111		64112	11.67	10.61
10 - 32	NF	3	BOTT	64113		64114	11.67	10.61
12 - 24	NC	3	PLUG	64121		64122	11.77	10.70
12 - 24	NC	3	BOTT	64123		64124	11.77	10.70
12 - 28	NF	3	PLUG	64131		64132	11.77	10.70
12 - 28	NF	3	BOTT	64133		64134	11.77	10.70

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				LIST PRICE	
				H-1	H-3	H-4	H-5	1-11	12+
1/4 - 20	NC	3	PLUG	64141	64142		64143	\$12.55	\$11.41
1/4 - 20	NC	3	BOTT	64144	64145		64146	12.55	11.41
1/4 - 28	NF	3	PLUG	64151	64152			12.55	11.41
1/4 - 28	NF	3	BOTT	64153	64154			12.55	11.41
5/16 - 18	NC	3	PLUG	64161	64162		64163	13.87	12.61
5/16 - 18	NC	3	BOTT	64164	64165		64166	13.87	12.61
5/16 - 24	NF	3	PLUG	64171	64172			13.87	12.61
5/16 - 24	NF	3	BOTT	64173	64174			13.87	12.61
3/8 - 16	NC	3	PLUG	64181	64182		64183	16.19	14.72
3/8 - 16	NC	3	BOTT	64184	64185		64186	16.19	14.72
3/8 - 24	NF	3	PLUG	64191	64192			16.19	14.72
3/8 - 24	NF	3	BOTT	64193	64194			16.19	14.72
7/16 - 14	NC	3	PLUG	64201	64202		64203	25.31	23.01
7/16 - 14	NC	3	BOTT	64204	64205		64206	25.31	23.01
7/16 - 20	NF	3	PLUG	64211	64212		64213	25.31	23.01
7/16 - 20	NF	3	BOTT	64214	64215		64216	25.31	23.01
1/2 - 13	NC	3	PLUG	64221	64222		64223	30.22	27.48
1/2 - 13	NC	3	BOTT	64224	64225		64226	30.22	27.48
1/2 - 20	NF	3	PLUG	64231	64232		64233	30.22	27.48
1/2 - 20	NF	3	BOTT	64234	64235		64236	30.22	27.48
								LIST PRICE	
								1-2	3+
9/16 - 12	NC	3	PLUG		64241		64242	33.19	30.18
9/16 - 12	NC	3	BOTT		64243		64244	33.19	30.18
9/16 - 18	NF	3	PLUG	64251	64252			33.19	30.18
9/16 - 18	NF	3	BOTT	64253	64254			33.19	30.18
5/8 - 11	NC	4	PLUG		64261		64262	41.96	38.14
5/8 - 11	NC	4	BOTT		64263		64264	41.96	38.14
5/8 - 18	NF	4	PLUG	64271	64272			41.96	38.14
5/8 - 18	NF	4	BOTT	64273	64274			41.96	38.14
3/4 - 10	NC	4	PLUG		64281		64282	59.08	53.71
3/4 - 10	NC	4	BOTT		64283		64284	59.08	53.71
3/4 - 16	NF	4	PLUG	64291	64292			59.08	53.71
3/4 - 16	NF	4	BOTT	64293	64294			59.08	53.71
7/8 - 9	NC	4	PLUG			64295		127.46	115.86
7/8 - 9	NC	4	BOTT			64297		127.46	115.86
1 - 8	NC	4	PLUG			64298		164.35	149.40
1 - 8	NC	4	BOTT			64299		164.35	149.40

## FAST SPIRAL FLUTED 52° MACHINE SCREW TAPS

LIST 101F

Plug  
Bottom



TAP SIZE	SERIES DESIGN.	NO. OF FLUTES	STYLE	EDP NUMBER			LIST PRICE	
				H-1	H-2	H-3	1-11	12+
3 - 48	NC	2	PLUG	19912	19922		\$17.53	\$15.94
3 - 48	NC	2	BOTT	19913	19923		17.53	15.94
3 - 56	NF	2	PLUG	20012	20022		17.53	15.94
3 - 56	NF	2	BOTT	20013	20023		17.53	15.94
4 - 40	NC	2	PLUG	20112	20122		14.70	13.36
4 - 40	NC	2	BOTT	20113	20123		14.70	13.36
4 - 48	NF	2	PLUG	20212	20222		14.70	13.36
4 - 48	NF	2	BOTT	20213	20223		14.70	13.36
5 - 40	NC	2	PLUG	20312	20322		14.70	13.36
5 - 40	NC	2	BOTT	20313	20323		14.70	13.36
5 - 44	NF	2	PLUG	20412	20422		14.70	13.36
5 - 44	NF	2	BOTT	20413	20423		14.70	13.36
6 - 32	NC	3	PLUG	20512		20532	11.67	10.61
6 - 32	NC	3	BOTT	20513		20533	11.67	10.61
6 - 40	NF	3	PLUG	20612	20622		11.67	10.61
6 - 40	NF	3	BOTT	20613	20623		11.67	10.61
8 - 32	NC	3	PLUG	20712		20732	11.67	10.61
8 - 32	NC	3	BOTT	20713		20733	11.67	10.61
8 - 36	NF	3	PLUG	20812	20822		11.67	10.61
8 - 36	NF	3	BOTT	20813	20823		11.67	10.61
10 - 24	NC	3	PLUG	20912		20932	11.67	10.61
10 - 24	NC	3	BOTT	20913		20933	11.67	10.61
10 - 32	NF	3	PLUG	21012		21032	11.67	10.61
10 - 32	NF	3	BOTT	21013		21033	11.67	10.61
12 - 24	NC	3	PLUG	21112		21132	11.77	10.70
12 - 24	NC	3	BOTT	21113		21133	11.77	10.70
12 - 28	NF	3	PLUG	21212		21232	11.77	10.70
12 - 28	NF	3	BOTT	21213		21233	11.77	10.70

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			LIST PRICE	
				H-1	H-3	H-5	1-11	12+
1/4 - 20	NC	3	PLUG	28501	28507	28511	\$12.55	\$11.41
1/4 - 20	NC	3	BOTT	28502	28508	28512	12.55	11.41
1/4 - 28	NF	3	PLUG	28517	28521		12.55	11.41
1/4 - 28	NF	3	BOTT	28518	28522		12.55	11.41
5/16 - 18	NC	3	PLUG	28531	28537	28539	13.87	12.61
5/16 - 18	NC	3	BOTT	28532	28538	28541	13.87	12.61
5/16 - 24	NF	3	PLUG	28547	28551		13.87	12.61
5/16 - 24	NF	3	BOTT	28548	28552		13.87	12.61
3/8 - 16	NC	3	PLUG	28561	28577	28581	16.19	14.72
3/8 - 16	NC	3	BOTT	28562	28578	28582	16.19	14.72
3/8 - 24	NF	3	PLUG	28587	28591		16.19	14.72
3/8 - 24	NF	3	BOTT	28588	28592		16.19	14.72
7/16 - 14	NC	4	PLUG	28601	28607	28611	25.31	23.01
7/16 - 14	NC	4	BOTT	28602	28608	28612	25.31	23.01
7/16 - 20	NF	4	PLUG	28617	28621	28627	25.31	23.01
7/16 - 20	NF	4	BOTT	28618	28622	28628	25.31	23.01
1/2 - 13	NC	4	PLUG	28631	28637	28641	30.22	27.48
1/2 - 13	NC	4	BOTT	28632	28638	28642	30.22	27.48
1/2 - 20	NF	4	PLUG	28647	28651	28657	30.22	27.48
1/2 - 20	NF	4	BOTT	28648	28652	28658	30.22	27.48
							LIST PRICE	
							1-2	3+
9/16 - 12	NC	4	PLUG		28667	28671	33.19	30.18
9/16 - 12	NC	4	BOTT		28668	28672	33.19	30.18
9/16 - 18	NF	4	PLUG	28677	28681		33.19	30.18
9/16 - 18	NF	4	BOTT	28678	28682		33.19	30.18
5/8 - 11	NC	4	PLUG		28697	28701	41.96	38.14
5/8 - 11	NC	4	BOTT		28698	28702	41.96	38.14
5/8 - 18	NF	4	PLUG	28707	28711		41.96	38.14
5/8 - 18	NF	4	BOTT	28708	28712		41.96	38.14
3/4 - 10	NC	4	PLUG		28727	28731	59.08	53.71
3/4 - 10	NC	4	BOTT		28728	28732	59.08	53.71
3/4 - 16	NF	4	PLUG	28737	28741		59.08	53.71
3/4 - 16	NF	4	BOTT	28738	28742		59.08	53.71

## OVERSIZE HAND TAPS MACHINE SCREW SIZES

LIST 115A

Plug  
Bottom



TAP SIZE	SERIES DESIGN.	NO. OF FLUTES	STYLE	EDP NUMBER			LIST PRICE	
				H-6	H-7	H-11	1-11	12+
4 - 40	NC	3	PLUG	21362	21372	21382	\$8.43	\$7.66
4 - 40	NC	3	BOTT	21363	21373	21383	8.43	7.66
4 - 48	NF	3	PLUG	21462	21472		8.43	7.66
4 - 48	NF	3	BOTT	21463	21473		8.43	7.66
5 - 40	NC	3	PLUG	21562	21572	21582	8.43	7.66
5 - 40	NC	3	BOTT	21563	21573	21583	8.43	7.66
5 - 44	NF	3	PLUG	21662	21672		8.43	7.66
5 - 44	NF	3	BOTT	21663	21673		8.43	7.66
6 - 32	NC	3	PLUG	21762	21772	21782	6.58	5.99
6 - 32	NC	3	BOTT	21763	21773	21783	6.58	5.99
6 - 40	NF	3	PLUG	21862	21872		6.58	5.99
6 - 40	NF	3	BOTT	21863	21873		6.58	5.99
8 - 32	NC	3	PLUG	21962	21972	21982	6.71	6.10
8 - 32	NC	3	BOTT	21963	21973	21983	6.71	6.10
8 - 36	NF	3	PLUG	22062	22072		6.71	6.10
8 - 36	NF	3	BOTT	22063	22073		6.71	6.10
10 - 24	NC	3	PLUG	22162	22172	22182	6.91	6.28
10 - 24	NC	3	BOTT	22163	22173	22183	6.91	6.28
10 - 32	NF	3	PLUG	22262	22272	22282	6.91	6.28
10 - 32	NF	3	BOTT	22263	22273	22283	6.91	6.28

### 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			LIST PRICE	
				H-6	H-7	H-11	1-11	12+
4 - 40	NC	2	SPPT PLUG	22362	22372	22382	\$9.68	\$8.79
4 - 40	NC	2	SPPT BOTT	22364	22374		9.68	8.79
4 - 48	NF	2	SPPT PLUG	22462	22472		9.68	8.79
4 - 48	NF	2	SPPT BOTT	22464	22474		9.68	8.79
5 - 40	NC	2	SPPT PLUG	22562	22572	22582	9.68	8.79
5 - 40	NC	2	SPPT BOTT	22564	22574		9.68	8.79
5 - 44	NF	2	SPPT PLUG	22662	22672		9.68	8.79
5 - 44	NF	2	SPPT BOTT	22664	22674		9.68	8.79
6 - 32	NC	2	SPPT PLUG	22762	22772	22782	7.40	6.72
6 - 32	NC	2	SPPT BOTT	22764	22774		7.40	6.72
6 - 40	NF	2	SPPT PLUG	22862	22872		7.40	6.72
6 - 40	NF	2	SPPT BOTT	22864	22874		7.40	6.72
8 - 32	NC	2	SPPT PLUG	22962	22972	22982	7.66	6.97
8 - 32	NC	2	SPPT BOTT	22964	22974		7.66	6.97
8 - 36	NF	2	SPPT PLUG	23062	23072		7.66	6.97
8 - 36	NF	2	SPPT BOTT	23064	23074		7.66	6.97
10 - 24	NC	2	SPPT PLUG	23162	23172	23182	7.82	7.10
10 - 24	NC	2	SPPT BOTT	23164	23174		7.82	7.10
10 - 32	NF	2	SPPT PLUG	23262	23272	23282	7.82	7.10
10 - 32	NF	2	SPPT BOTT	23264	23274		7.82	7.10

### 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			LIST PRICE	
				PLUG EDP NUMBER	BOTTOM EDP NUMBER	SPPT PLUG EDP NUMBER	1-11	12+
1/4 - 20	NC	4	H-11	40573	40575		\$8.82	\$8.02
1/4 - 20	NC	2	H-11			40474	10.42	9.47
1/4 - 28	NF	4	H-11	40773	40775		8.82	8.02
1/4 - 28	NF	2	H-11			40674	10.42	9.47
5/16 - 18	NC	4	H-11	40973	40975		9.89	8.99
5/16 - 18	NC	3	H-11			40874	11.63	10.57
5/16 - 24	NF	4	H-11	41173	41175		9.89	8.99
5/16 - 24	NF	3	H-11			41074	11.63	10.57
3/8 - 16	NC	4	H-11	41373	41375		10.40	9.45
3/8 - 16	NC	3	H-11			41274	12.49	11.35
3/8 - 24	NF	4	H-11	41573	41575		10.40	9.45
3/8 - 24	NF	3	H-11			41474	12.49	11.35
7/16 - 14	NC	4	H-11	41773	41775		16.34	14.86
7/16 - 14	NC	3	H-11			41674	19.12	17.38
7/16 - 20	NF	4	H-11	41973	41975		16.34	14.86
7/16 - 20	NF	3	H-11			41874	19.12	17.38
1/2 - 13	NC	4	H-11	42173	42175		19.40	17.64
1/2 - 13	NC	3	H-11			42074	22.76	20.69
1/2 - 20	NF	4	H-11	42373	42375		19.40	17.64
1/2 - 20	NF	3	H-11			42274	22.76	20.69
							LIST PRICE	
							1-5	6+
5/8 - 11	NC	4	H-11	42401	42402		38.43	34.94
5/8 - 11	NC	3	H-11			42403	41.25	37.50
5/8 - 18	NF	4	H-11	42411	42412		38.43	34.94
5/8 - 18	NF	3	H-11			42413	41.25	37.50
3/4 - 10	NC	4	H-11	42421	42422		54.13	49.20
3/4 - 10	NC	3	H-11			42423	56.94	51.76
3/4 - 16	NF	4	H-11	42431	42432		54.13	49.20
3/4 - 16	NF	3	H-11			42433	56.94	51.76
7/8 - 9	NC	4	H-11	42441	42442		75.04	68.22
7/8 - 14	NF	4	H-11	42451	42452		75.04	68.22
1 - 8	NC	4	H-11	42461	42462		75.04	68.22

### 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			LIST PRICE	
			H-1	H-2	H-3	1-11	12+
3 - 48	NC	SPPT PLUG	36712	36722		\$12.20	\$11.09
3 - 56	NF	SPPT PLUG		36822		12.20	11.09
4 - 40	NC	SPPT PLUG	37012	37022		10.02	9.11
4 - 48	NF	SPPT PLUG		37122		10.02	9.11
4 - 36	NS	SPPT PLUG		36922		10.02	9.11
5 - 40	NC	SPPT PLUG		37222		10.02	9.11
5 - 44	NF	SPPT PLUG		37322		10.02	9.11
6 - 32	NC	SPPT PLUG		37422	37432	8.12	7.39
6 - 40	NF	SPPT PLUG		37522		8.12	7.39
8 - 32	NC	SPPT PLUG		37622	37632	8.12	7.39
10 - 24	NC	SPPT PLUG		37822	37832	8.18	7.44
10 - 32	NF	SPPT PLUG	37912	37922	37932	8.18	7.44
12 - 24	NC	SPPT PLUG			38032	8.25	7.49
12 - 28	NF	SPPT PLUG			38132	8.25	7.49
14 - 20	NS	SPPT PLUG			38232	10.02	9.11

## FLUTELESS SPIRAL POINT FRACTIONAL TAPS

LIST 104C

Spiral Point Plug



TAP SIZE	SERIES DESIGN.	STYLE	EDP NUMBER		LIST PRICE	
			H-3	H-5	1-11	12+
1/4 - 20	NC	SPPT PLUG	35432	35452	\$8.31	\$7.55
1/4 - 28	NF	SPPT PLUG	35532		8.31	7.55
5/16 - 18	NC	SPPT PLUG	35632	35652	9.40	8.54
5/16 - 24	NF	SPPT PLUG	35732		9.40	8.54
3/8 - 16	NC	SPPT PLUG	35832	35852	10.92	9.93
3/8 - 24	NF	SPPT PLUG	35932		10.92	9.93
7/16 - 14	NC	SPPT PLUG	36032	36052	17.00	15.45
7/16 - 20	NF	SPPT PLUG	36132		17.00	15.45
1/2 - 13	NC	SPPT PLUG	36232		22.15	20.13
1/2 - 20	NF	SPPT PLUG	36332		22.15	20.13

## INTERRUPTED THREAD FRACTIONAL TAPS

LIST 108

Taper  
Plug  
Bottom



TAP SIZE	SERIES DESIGN.	NO. OF FLUTES	H LIMIT	108			LIST PRICE	
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	1-11	12+
1/4 - 20	NC	3	H-3	39231	39232	39233	\$12.20	\$11.09
1/4 - 28	NF	3	H-3	39331	39332	39333	12.20	11.09
5/16 - 18	NC	3	H-3	39431	39432	39433	13.67	12.43
5/16 - 24	NF	3	H-3	39531	39532	39533	13.67	12.43
3/8 - 16	NC	3	H-3	39631	39632	39633	15.72	14.28
3/8 - 24	NF	3	H-3	39731	39732	39733	15.72	14.28
1/2 - 13	NC	3	H-3		39742	39743	43.87	39.89
1/2 - 20	NF	3	H-3		39762	39763	43.87	39.89
5/8 - 11	NC	3	H-3		39772	39773	58.89	53.54

## INTERRUPTED THREAD SPIRAL POINT FRACTIONAL TAPS

LIST 109

Spiral Point Plug



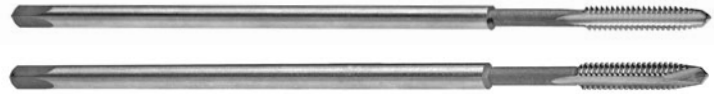
TAP SIZE	SERIES DESIGN.	NO. OF FLUTES	H LIMIT	109	LIST PRICE	
				SPPT PLUG EDP NUMBER	1-11	12+
1/4 - 20	NC	3	H-3	39832	\$13.67	\$12.43
1/4 - 28	NF	3	H-3	39932	13.67	12.43
5/16 - 18	NC	3	H-3	40032	14.94	13.59
5/16 - 24	NF	3	H-3	40132	14.94	13.59
3/8 - 16	NC	3	H-3	40232	17.37	15.79
3/8 - 24	NF	3	H-3	40332	17.37	15.79
1/2 - 13	NC	3	H-3	40342	47.49	43.17
1/2 - 20	NF	3	H-3	40352	47.49	43.17
5/8 - 11	NC	3	H-3	40362	64.44	58.59
3/4 - 10	NC	3	H-3	40372	86.31	78.48

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			LIST PRICE	
				PLUG EDP NUMBER	BOTTOM EDP NUMBER	SPPT PLUG EDP NUMBER	1-11	12+*
6 - 32	NC	3	H-3	38632	38633		\$36.35	\$26.89
6 - 32	NC	2	H-3			38532	37.49	27.85
8 - 32	NC	3	H-3	38832	38833		35.94	26.31
8 - 32	NC	2	H-3			38732	36.95	27.27
10 - 24	NC	3	H-3	39024	39025		34.13	24.56
10 - 24	NC	2	H-3			38924	35.23	25.56
10 - 32	NF	3	H-3	39032	39033		34.13	24.56
10 - 32	NF	2	H-3			38932	35.23	25.56

## NUT TAPS FRACTIONAL SIZES

**LIST 111A**

**Taper  
Plug**



TAP SIZE	SERIES DESIGN.	NO. OF FLUTES	H LIMIT	OVERALL LENGTH	111A		LIST PRICE	
					TAPER EDP NUMBER	PLUG EDP NUMBER	1-5	6+*
1/4 - 20	NC	4	H-3	5"	42531	42532	\$48.77	\$44.33
1/4 - 28	NF	4	H-3	5"	42631	42632	48.77	44.33
5/16 - 18	NC	4	H-3	5 1/2"	42731	42732	55.04	50.04
5/16 - 24	NF	4	H-3	5 1/2"	42831	42832	55.04	50.04
3/8 - 16	NC	4	H-3	6"	42931	42932	64.95	59.05
3/8 - 24	NF	4	H-3	6"	43031	43032	64.95	59.05
7/16 - 14	NC	4	H-3	6 1/2"	43131	43132	78.31	71.19
7/16 - 20	NF	4	H-3	6 1/2"	43231	43232	78.31	71.19
1/2 - 13	NC	4	H-3	7"	43331	43332	88.04	80.04
1/2 - 20	NF	4	H-3	7"	43431	43432	88.04	80.04
5/8 - 11	NC	4	H-3	8"	43531	43532	107.67	97.89
5/8 - 18	NF	4	H-3	8"	43631	43632	107.67	97.89
3/4 - 10	NC	4	H-3	9"	43731	43732	150.36	136.70
3/4 - 16	NF	4	H-3	9"	43831	43832	150.36	136.70
7/8 - 9	NC	4	H-4	10"	43941	43942	210.16	191.05
7/8 - 14	NF	4	H-4	10"	44041	44042	210.16	191.05
1 - 8	NC	4	H-4	11"	44141	44142	280.81	255.28
1 - 14	NS	4	H-4	11"	44241	44242	280.81	255.28

\*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	LIST PRICE 1 OR MORE*
						PLUG EDP NUMBER	
1/4 - 20	NC	4"	4	H-3	.255	45022	\$21.23
1/4 - 20	NC	6"	4	H-3	.255	45032	31.63
1/4 - 20	NC	8"	4	H-3	.255	45042	41.68
1/4 - 28	NF	6"	4	H-3	.255	44432	32.85
5/16 - 18	NC	4"	4	H-3	.318	45122	21.96
5/16 - 18	NC	6"	4	H-3	.318	45132	32.99
5/16 - 18	NC	8"	4	H-3	.318	45142	45.15
5/16 - 24	NF	6"	4	H-3	.318	44532	35.14
3/8 - 16	NC	4"	4	H-3	.381	45618	22.63
3/8 - 16	NC	6"	4	H-3	.381	45232	37.14
3/8 - 16	NC	8"	4	H-3	.381	45242	48.20
3/8 - 16	NC	10"	4	H-3	.381	45252	59.20
3/8 - 16	NC	12"	4	H-3	.381	45262	65.13
3/8 - 24	NF	6"	4	H-3	.381	44632	39.85
7/16 - 14	NC	6"	4	H-3	.444	45332	37.63
7/16 - 14	NC	8"	4	H-3	.444	45342	49.00
7/16 - 14	NC	10"	4	H-3	.444	45352	60.25
7/16 - 14	NC	12"	4	H-3	.444	45362	70.80
7/16 - 20	NF	6"	4	H-3	.444	44732	46.28
1/2 - 13	NC	6"	4	H-3	.507	45432	38.80
1/2 - 13	NC	8"	4	H-3	.507	45442	53.54
1/2 - 13	NC	10"	4	H-3	.507	45452	64.83
1/2 - 13	NC	12"	4	H-3	.507	45472	75.95
1/2 - 20	NF	6"	4	H-3	.507	44832	48.55
5/8 - 11	NC	6"	4	H-3	.633	45532	50.04
5/8 - 11	NC	8"	4	H-3	.633	45542	70.80
5/8 - 11	NC	10"	4	H-3	.633	45552	86.28
5/8 - 11	NC	12"	4	H-3	.633	45562	100.06
5/8 - 11	NC	14"	4	H-3	.633	45572	113.93
3/4 - 10	NC	6"	4	H-3	.759	45622	70.96
3/4 - 10	NC	8"	4	H-3	.759	45632	91.01
3/4 - 10	NC	10"	4	H-3	.759	45652	105.26
3/4 - 10	NC	12"	4	H-3	.759	45662	122.51
3/4 - 10	NC	14"	4	H-3	.759	45672	139.97
7/8 - 9	NC	6"	4	H-4	.885	45810	104.47
7/8 - 9	NC	8"	4	H-4	.885	45812	128.75
7/8 - 9	NC	10"	4	H-4	.885	45814	153.79
1 - 8	NC	8"	4	H-4	1.011	45842	149.75
1 - 8	NC	10"	4	H-4	1.011	45852	162.43
1 - 8	NC	12"	4	H-4	1.011	45862	191.53

\*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	LIST PRICE		
					SPPT PLUG EDP NUMBER	1-11	12-23	24-71*
4 - 40	NC	4"	2	H-2	38322	\$42.75	\$36.92	\$29.73
4 - 48	NF	4"	2	H-2	38323	42.75	36.92	29.73
5 - 40	NC	4"	2	H-2	38308	41.07	35.21	28.03
6 - 32	NC	4"	2	H-3	38325	37.07	31.24	24.05
6 - 32	NC	6"	2	H-3	38532	37.49	27.85	27.85
8 - 32	NC	4"	2	H-3	38329	36.39	30.53	23.38
8 - 32	NC	6"	2	H-3	38732	36.95	27.27	27.27
10 - 24	NC	4"	2	H-3	38346	35.59	29.73	22.56
10 - 24	NC	6"	2	H-3	38924	35.23	25.56	25.56
10 - 32	NF	4"	2	H-3	38394	35.59	29.73	22.56
10 - 32	NF	6"	2	H-3	38932	35.23	25.56	25.56
1/4 - 20	NC	4"	2	H-3	45704	35.96	30.11	22.70
1/4 - 20	NC	6"	2	H-3	45701	47.13	39.57	34.88
1/4 - 20	NC	8"	2	H-3	45708	58.45	50.58	41.86
1/4 - 28	NF	6"	2	H-3	45724	49.48	41.57	36.61
5/16 - 18	NC	4"	2	H-3	45714	36.69	30.84	23.66
5/16 - 18	NC	6"	2	H-3	45706	49.51	41.57	36.63
5/16 - 18	NC	8"	2	H-3	45710	58.91	51.43	42.33
5/16 - 24	NF	6"	2	H-3	45731	52.00	43.61	38.46
3/8 - 16	NC	4"	3	H-3	45718	37.28	31.43	24.25
3/8 - 16	NC	6"	3	H-3	45711	51.78	44.11	39.44
3/8 - 16	NC	8"	3	H-3	45728	63.67	55.92	47.21
3/8 - 24	NF	6"	3	H-3	45734	54.37	46.33	41.41
7/16 - 14	NC	6"	3	H-3	45713	57.38	49.56	45.21
7/16 - 20	NF	6"	3	H-3	45715	57.38	49.56	45.21
1/2 - 13	NC	6"	3	H-3	45716	59.28	52.15	47.47
1/2 - 13	NC	8"	3	H-3	45782	74.98	67.14	62.33
1/2 - 20	NF	6"	3	H-3	45717	59.28	52.15	47.47
5/8 - 11	NC	6"	3	H-3	45721	73.58	66.49	61.34
5/8 - 11	NC	8"	3	H-3	45929	98.85	90.62	82.32
3/4 - 10	NC	6"	3	H-3	45774	92.30	84.70	79.66
3/4 - 10	NC	8"	3	H-3	45776	115.37	107.75	102.73

\*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	LIST PRICE		
						PLUG EDP NUMBER	1-11	12-23	24-71*
6 - 32	NC	6"	3	H-3	.097	38332	\$36.35	\$31.28	\$26.89
8 - 32	NC	6"	3	H-3	.123	38331	35.94	30.92	26.31
10 - 24	NC	6"	3	H-3	.136	38342	34.13	29.35	24.56
10 - 32	NF	6"	3	H-3	.136	39014	34.13	29.35	24.56
1/4 - 20	NC	4"	4	H-3	.185	45612	34.03	27.96	20.79
1/4 - 20	NC	6"	4	H-3	.185	45681	43.94	36.35	31.64
1/4 - 28	NF	6"	4	H-3	.185	45719	46.12	38.17	33.22
5/16 - 18	NC	4"	4	H-3	.240	45614	34.60	28.79	21.60
5/16 - 18	NC	6"	4	H-3	.240	45683	43.94	36.35	31.64
5/16 - 24	NF	6"	4	H-3	.240	45631	43.94	36.35	31.64
3/8 - 16	NC	4"	4	H-3	.275	45779	35.14	29.28	22.13
3/8 - 16	NC	6"	4	H-3	.275	45685	47.95	40.32	35.61
3/8 - 16	NC	8"	4	H-3	.275	45686	58.60	50.86	45.88
3/8 - 24	NF	6"	4	H-3	.275	45641	47.95	40.32	35.61
1/2 - 13	NC	4"	4	H-3	.367	45748	43.83	36.44	31.81
1/2 - 13	NC	6"	4	H-3	.367	45687	54.55	47.43	42.72
1/2 - 13	NC	8"	4	H-3	.367	45668	68.56	60.47	55.89
1/2 - 20	NF	6"	4	H-3	.367	45661	54.55	47.43	42.72
5/8 - 11	NC	6"	4	H-3	.480	45689	67.19	60.10	54.94
5/8 - 11	NC	8"	4	H-3	.480	45952	89.29	81.03	76.06
5/8 - 18	NF	6"	4	H-3	.480	44956	67.19	60.10	54.94
3/4 - 10	NC	6"	4	H-3	.590	45831	83.62	76.01	70.96
3/4 - 10	NC	8"	4	H-3	.590	45832	103.64	96.03	91.01
3/4 - 10	NC	10"	4	H-3	.590	45834	121.02	113.17	108.13
3/4 - 16	NF	6"	4	H-3	.590	45789	83.62	76.01	70.96
7/8 - 9	NC	6"	4	H-4	.697	45741	119.54	110.74	104.47
7/8 - 9	NC	8"	4	H-4	.697	45761	145.28	136.48	128.75
7/8 - 9	NC	10"	4	H-4	.697	45771	177.57	163.01	153.79
7/8 - 9	NC	12"	4	H-4	.697	45772	200.75	186.20	175.66
1 - 8	NC	6"	4	H-4	.800	45839	128.17	119.39	112.62
1 - 8	NC	8"	4	H-4	.800	45841	173.33	158.75	149.75
1 - 8	NC	10"	4	H-4	.800	45851	207.56	172.17	162.43
1 - 8	NC	12"	4	H-4	.800	45859	238.44	203.02	191.53

\*For larger quantity prices, consult factory.

## SMALL SHANK SPIRAL POINT EXTENSION TAPS

### LIST 113SP EXTENSION

### Spiral Point Plug



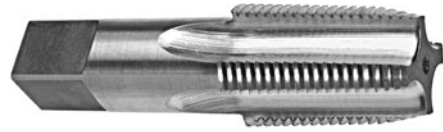
TAP SIZE	SERIES DESIGN.	OVERALL LENGTH	NO. OF FLUTES	H LIMIT	SHANK DIAMETER	113SP	LIST PRICE		
						SPPT PLUG EDP NUMBER	1-11	12-23	24-71*
4 - 40	NC	4"	2	H-2	.080	38302	\$42.75	\$36.92	\$29.73
4 - 48	NF	4"	2	H-2	.080	38304	42.75	36.92	29.73
5 - 40	NC	4"	2	H-2	.093	38312	41.07	35.21	28.03
6 - 32	NC	4"	2	H-3	.097	38324	37.07	31.24	24.05
6 - 32	NC	6"	2	H-3	.097	38326	37.49	32.23	27.85
8 - 32	NC	4"	2	H-3	.123	38328	36.39	30.53	23.38
8 - 32	NC	6"	2	H-3	.123	38330	36.95	31.78	27.27
10 - 24	NC	4"	2	H-3	.136	38341	35.59	29.73	22.56
10 - 24	NC	6"	2	H-3	.136	38343	35.23	25.56	25.56
10 - 32	NF	4"	2	H-3	.136	38992	35.59	29.73	22.56
10 - 32	NF	6"	2	H-3	.136	39012	35.23	25.56	25.56
1/4 - 20	NC	4"	2	H-3	.185	45619	35.96	30.11	22.70
1/4 - 20	NC	6"	2	H-3	.185	45732	47.13	39.57	34.88
1/4 - 28	NF	6"	2	H-3	.185	45722	47.13	39.57	34.88
5/16 - 18	NC	4"	2	H-3	.240	45753	36.69	30.84	23.66
5/16 - 18	NC	6"	2	H-3	.240	45737	49.51	41.57	36.63
5/16 - 24	NF	6"	2	H-3	.240	45723	49.51	41.57	36.63
3/8 - 16	NC	4"	3	H-3	.275	45778	37.28	31.43	24.25
3/8 - 16	NC	6"	3	H-3	.275	45742	51.78	44.11	39.44
3/8 - 16	NC	8"	3	H-3	.275	45738	63.67	55.92	47.21
3/8 - 24	NF	6"	3	H-3	.275	45743	51.78	44.11	39.44
7/16 - 14	NC	6"	3	H-3	.323	45792	57.38	49.56	45.21
7/16 - 20	NF	6"	3	H-3	.323	45745	57.38	49.56	45.21
1/2 - 13	NC	4"	3	H-3	.367	45744	46.92	39.56	34.91
1/2 - 13	NC	6"	3	H-3	.367	45747	59.28	52.15	47.47
1/2 - 13	NC	8"	3	H-3	.367	45665	74.98	67.14	62.33
1/2 - 20	NF	6"	3	H-3	.367	45749	59.28	52.15	47.47
5/8 - 11	NC	6"	3	H-3	.480	45752	73.58	66.49	61.34
5/8 - 11	NC	8"	3	H-3	.480	45932	98.85	90.62	82.32
5/8 - 18	NF	6"	3	H-3	.480	45922	73.58	66.49	61.34
3/4 - 10	NC	6"	3	H-3	.590	45756	92.30	84.70	79.66
3/4 - 10	NC	8"	3	H-3	.590	45835	115.37	107.75	102.73
3/4 - 10	NC	10"	3	H-3	.590	45783	135.37	127.51	122.49
3/4 - 16	NF	6"	3	H-3	.590	45784	92.30	84.70	79.66

\*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	LIST PRICE		120C	LIST PRICE	
		NPT REGULAR EDP NUMBER	NPTF REGULAR EDP NUMBER	1-11	12+	NPT ECONOMY EDP NUMBER	1-11	12+
1/16 - 27	4	46102	46202	\$21.46	\$19.50	-	-	-
1/8 - 27	4	46104	46204	21.46	19.50	46004	\$17.37	\$15.79
1/8 - 27	5	46106	46206	21.46	19.50	46006	17.37	15.79
1/8 - 27 sm sh*	4	46107	46207	21.46	19.50	46007	17.37	15.79
1/8 - 27 sm sh*	5	46108	46208	21.46	19.50	46008	17.37	15.79
1/4 - 18	4	46110	46210	24.08	21.89	46010	19.65	17.87
1/4 - 18	5	46112	46212	24.08	21.89	46012	19.65	17.87
3/8 - 18	4	46116	46216	30.77	27.97	46016	25.04	22.76
3/8 - 18	5	46118	46218	30.77	27.97	46018	25.04	22.76
				LIST PRICE			LIST PRICE	
				1-2	3+		1-2	3+
1/2 - 14	4	46122	46222	51.22	46.56	46022	41.68	37.88
1/2 - 14	5	46124	46224	51.22	46.56	46024	41.68	37.88
3/4 - 14	5	46128	46228	74.27	67.52	46028	60.45	54.94
				LIST PRICE			LIST PRICE	
				1 OR MORE			1 OR MORE	
1 - 11 1/2	5	46132	46232	95.91		46032	86.52	
1 1/4 - 11 1/2	5	46136	46236	136.53		46036	123.31	
1 1/2 - 11 1/2	7	46138	46240	184.46		46040	166.42	
2 - 11 1/2	7	46144	46244	250.08		46044	225.87	
2 1/2 - 8	7	46148	46248	408.27		46048	337.41	
3 - 8	8	46152	46252	592.74		46052	478.35	
3 1/2 - 8	8	46158	46258	797.09		46058	634.09	
4 - 8	8	46160	46260	1020.53		46060	825.40	

\*Small Shank .3125

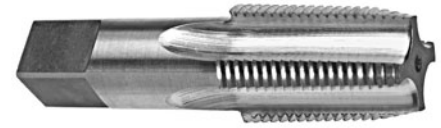
See page 92 for Pipe Tap Dimensions.

**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	LIST PRICE	
		NPT REGULAR EDP NUMBER	NPTF REGULAR EDP NUMBER	1-11	12+
1/16 - 27	4	46442	46443	\$24.67	\$22.42
1/8 - 27	4	46446	46447	24.67	22.42
1/8 - 27	5	46450	46451	24.67	22.42
1/8 - 27 sm sh*	4	46454	46455	24.67	22.42
1/8 - 27 sm sh*	5	46456	46457	24.67	22.42
1/4 - 18	4	46460	46461	26.48	24.08
1/4 - 18	5	46462	46463	26.48	24.08
3/8 - 18	4	46466	46467	33.85	30.77
3/8 - 18	5	46468	46469	33.85	30.77
				LIST PRICE	
				1-2	3+
1/2 - 14	4	46472	46473	53.77	48.89
1/2 - 14	5	46474	46475	53.77	48.89
3/4 - 14	5	46478	46479	74.27	67.52
				LIST PRICE	
				1 OR MORE	
1 - 11 1/2	5	46482	46483	95.91	
1 1/4 - 11 1/2	5	46486	46487	136.53	
1 1/2 - 11 1/2	7	46490	46491	184.46	
2 - 11 1/2	7	46494	46495	250.08	

## 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		LIST PRICE 1 OR MORE
			BSPP PLUG EDP NUMBER	BSPP BOTTOM EDP NUMBER	
1/8 - 28 (G 1/8)	4	.3372 - .3488	47050	47051	\$32.05
1/4 - 19 (G 1/4)	4	.4505 - .4680	47052	47053	40.32
3/8 - 19 (G 3/8)	4	.5885 - .6060	47054	47055	53.76
1/2 - 14 (G 1/2)	4	.7335 - .7548	47056	47057	69.54
3/4 - 14 (G 3/4)	5	.9495 - .9707	47058	47059	97.19
1 - 11 (G 1)	5	1.1926 - 1.2178	47060	47061	127.58
1 1/4 - 11 (G 1 1/4)	5	1.5335 - 1.5887	47062	47063	199.66
1 1/2 - 11 (G 1 1/2)	7	1.7655 - 1.7907	47064	47065	282.47
2 - 11 (G 2)	7	2.2306 - 2.2558	47066	47067	401.60

\*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	LIST PRICE	
		NPT INTERRUPTED EDP NUMBER	NPTF INTERRUPTED EDP NUMBER	1-11	12+
1/8 - 27	5	46452	46453	\$30.79	\$27.99
1/8 - 27 sm sh*	5	46458	46459	30.79	27.99
1/4 - 18	5	46464	46465	32.48	29.52
3/8 - 18	5	46470	46471	41.20	37.45
				LIST PRICE	
				1-2	3+
1/2 - 14	5	46476	46477	64.16	58.32
3/4 - 14	5	46480	46481	88.97	80.87
				LIST PRICE	
				1 OR MORE	
1 - 11 1/2	5	46484	46485	128.49	
1 1/4 - 11 1/2	5	46488	46489	182.43	
1 1/2 - 11 1/2	7	46492	46493	246.14	
2 - 11 1/2	7	46496	46497	333.55	

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

LIST 123  
BSPT (R<sub>c</sub>)

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 <sub>c</sub> ) STANDARD PROJECTIONS	DRILL DIAMETER		123	LIST PRICE 1 OR MORE
			WITHOUT REAMER	WITH REAMER	BSPT EDP NUMBER	
1/8 - 28 (R <sub>c</sub> 1/8)	4	.206 ± .035	8.40MM	8.00MM	47070	\$36.60
1/4 - 19 (R <sub>c</sub> 1/4)	4	.304 ± .050	11.20MM	10.80MM	47074	40.89
3/8 - 19 (R <sub>c</sub> 3/8)	4	.306 ± .050	14.75MM	14.25MM	47078	54.37
1/2 - 14 (R <sub>c</sub> 1/2)	4	.416 ± .070	18.25MM	17.75MM	47080	83.45
3/4 - 14 (R <sub>c</sub> 3/4)	5	.413 ± .070	23.75MM	23.00MM	47082	116.63
1 - 11 (R <sub>c</sub> 1)	5	.525 ± .080	30.00MM	29.00MM	47084	172.24
1 1/4 - 11 (R <sub>c</sub> 1 1/4)	5	.524 ± .080	38.50MM	37.50MM	47086	259.57
1 1/2 - 11 (R <sub>c</sub> 1 1/2)	7	.524 ± .090	44.50MM	43.50MM	47088	338.97

\*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**

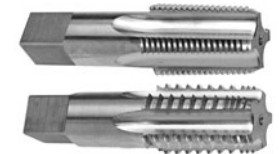


TAP SIZE	NO. OF FLUTES	114G	114DS	LIST PRICE		114C	LIST PRICE	
		NPT INTERRUPTED EDP NUMBER	NPTF INTERRUPTED EDP NUMBER	1-11	12+	NPT ECONOMY EDP NUMBER	1-11	12+
1/16 - 27	5	46602	46702	\$32.13	\$29.21	-	-	-
1/8 - 27	5	46604	46704	26.79	24.35	46504	\$21.81	\$19.82
1/8 - 27 sm sh*	5	46606	46706	26.79	24.35	46506	21.81	19.82
1/4 - 18	5	46612	46712	29.53	26.84	46512	24.06	21.87
3/8 - 18	5	46618	46718	37.46	34.06	46518	30.44	27.68
				LIST PRICE			LIST PRICE	
				1-2	3+		1-2	3+
1/2 - 14	5	46624	46724	61.10	55.55	46524	49.69	45.17
3/4 - 14	5	46628	46728	88.97	80.87	46528	72.22	65.65
				LIST PRICE			LIST PRICE	
				1 OR MORE			1 OR MORE	
1 - 11 1/2	5	46632	46732	128.49		46532	104.38	
1 1/4 - 11 1/2	5	46636	46736	182.43		46536	148.18	
1 1/2 - 11 1/2	7	46640	46740	246.14		46540	199.99	
2 - 11 1/2	7	46644	46744	333.55		46544	270.96	

## 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	LIST PRICE		NO. OF FLUTES	115DS	LIST PRICE	
		PTF SAE REGULAR EDP NUMBER	1-11	12+		PTF SAE INTERRUPTED EDP NUMBER	1-11	12+
1/16 - 27	4	47001	\$21.46	\$19.50	-	-	-	-
1/8 - 27	4	47003	21.46	19.50	5	47107	\$26.79	\$24.35
1/8 - 27 sm sh*	4	47007	21.46	19.50	5	47111	26.79	24.35
1/4 - 18	4	47009	24.08	21.89	5	47113	29.53	26.84
3/8 - 18	4	47015	30.77	27.97	5	47119	37.46	34.06
1/2 - 14	4	47021	51.22	46.56	5	47125	61.10	55.55
3/4 - 14	5	47027	74.27	67.52	5	47129	88.97	80.87
			LIST PRICE			LIST PRICE		
			1 OR MORE			1 OR MORE		
1 - 11 1/2	5	47031	106.58		5	47133	128.49	
1 1/4 - 11 1/2	5	47035	151.69		5	47137	182.43	
1 1/2 - 11 1/2	7	47039	204.95		7	47141	246.14	
2 - 11 1/2	7	47043	277.87		7	47145	333.55	

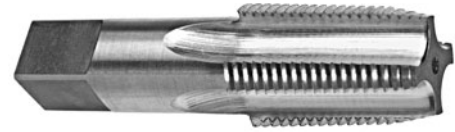
\*Small Shank .3125

## 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

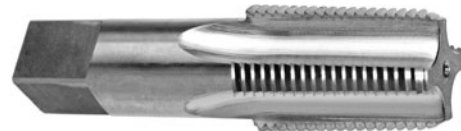


TAP SIZE	NO. OF FLUTES	120GCI	120DSCI	121DSCI	LIST PRICE	
		NPT REGULAR EDP NUMBER	NPTF REGULAR EDP NUMBER	PTF SAE REGULAR EDP NUMBER	1-11	12+
1/16 - 27	4	46162	46262	47068	\$21.46	\$19.50
1/8 - 27	4	46164	46264	47069	21.46	19.50
1/4 - 18	4	46170	46270	47071	24.08	21.89
3/8 - 18	4	46176	46276	47075	30.77	27.97
					LIST PRICE	
					1-2	3+
1/2 - 14	4	46182	46282	47081	51.22	46.56
3/4 - 14	5	46188	46288	47087	74.27	67.52
					LIST PRICE	
					1 OR MORE	
1 - 11 1/2	5	46192	46292	47091	95.91	
1 1/4 - 11 1/2	5	46196	46296	47095	136.53	
1 1/2 - 11 1/2	7	46198	46298	47098	184.46	
2 - 11 1/2	7	46199	46299	47099	250.08	

## 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	LIST PRICE		
		NPT REGULAR EDP NUMBER	NPTF REGULAR EDP NUMBER	1-11	12+	
1/16 - 27	4	46101	46201	\$21.46	\$19.50	
1/8 - 27	4	46105	46205	21.46	19.50	
1/4 - 18	4	46111	46211	24.08	21.89	
3/8 - 18	4	46117	46217	30.77	27.97	
					LIST PRICE	
					1-2	3+
1/2 - 14	4	46123	46223	51.22	46.56	
3/4 - 14	5	46130	46230	74.27	67.52	
					LIST PRICE	
					1 OR MORE	
1 - 11 1/2	5	46133	46233	95.91		
1 1/4 - 11 1/2	5	46137	46237	136.53		
1 1/2 - 11 1/2	7	46139	46239	184.46		
2 - 11 1/2	7	46145	46245	250.08		

## 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	LIST PRICE	
		NPT INTERRUPTED EDP NUMBER	NPTF INTERRUPTED EDP NUMBER	PTF SAE INTERRUPTED EDP NUMBER	1-11	12+
1/8 - 27	5	46654	46754	47157	\$26.79	\$24.35
1/4 - 18	5	46662	46762	47163	29.53	26.84
3/8 - 18	5	46668	46768	47169	37.46	34.06
					LIST PRICE	
					1-2	3+
1/2 - 14	5	46674	46774	47175	61.10	55.55
3/4 - 14	5	46678	46778	47179	88.97	80.87
					LIST PRICE	
					1 OR MORE	
1 - 11 1/2	5	46682	46782	47183	128.49	
1 1/4 - 11 1/2	5	46686	46786	47187	182.43	
1 1/2 - 11 1/2	7	46690	46790	47191	246.14	
2 - 11 1/2	7	46694	46794	47195	333.55	

## TAPER PIPE TAPS SMALL SHANK (.480) INTERRUPTED THREAD

LIST 118GI  
 LIST 118DSI

NPT Ground Thread Interrupted  
 NPTF Ground Thread Interrupted



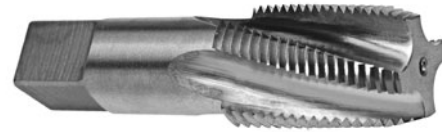
TAP SIZE	NO. OF FLUTES	OVERALL LENGTH	THREAD LENGTH	118GI	118DSI	LIST PRICE	
				NPT INTERRUPTED EDP NUMBER	NPTF INTERRUPTED EDP NUMBER	1-11	12+
1/4 - 18	5	3-1/16	1-1/16	46421	46426	\$29.53	\$26.84
3/8 - 18	5	3-1/16	1-1/16	46423	46428	37.46	34.06
						LIST PRICE	
						1-2	3+
1/2 - 14	5	3-3/8	1-3/8	46425	46430	61.10	55.55

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	LIST PRICE	
		NPT REGULAR EDP NUMBER	NPTF REGULAR EDP NUMBER	1-11	12+
1/8 - 27	4	46801	46802	\$29.13	\$26.48
1/4 - 18	4	46803	46804	33.50	30.45
3/8 - 18	4	46805	46806	44.02	40.01
1/2 - 14	4	46807	46808	69.33	63.03
3/4 - 14	5	46809	46810	101.07	91.88
				LIST PRICE 1 OR MORE	
1 - 11 1/2	5	46811	46812	129.20	

## 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	LIST PRICE	
				NPT REGULAR EDP NO.	NPTF REGULAR EDP NO.	NPS REGULAR EDP NO.	NPSF REGULAR EDP NO.	1-11	12+
1/4 - 18	5	3-1/16	1-1/16	46401	46406	46411	46416	\$24.08	\$21.89
3/8 - 18	5	3-1/16	1-1/16	46403	46408	46413	46418	30.77	27.97
								LIST PRICE 1-2 3+	
1/2 - 14	5	3-3/8	1-3/8	46405	46410	46415	46420	51.22	46.56

**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.

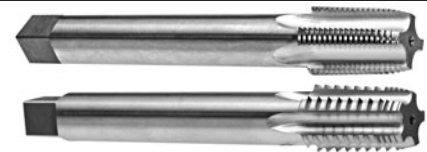
**SPECIAL PROJECTION TAPER PIPE TAPS – STRAIGHT FLUTE** 1/16" to 3/4" Taper Pipe Taps with standard projection tolerances are priced at the standard catalog price when 12 or more are ordered. Quantities less than 12 will receive special pricing. 1" through 2" Taper Pipe Taps with standard projection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

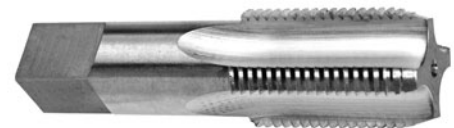


TAP SIZE	NO. OF FLUTES	OVERALL LENGTH	126G	126DS	126GI	126DSI	LIST PRICE	
			NPT REGULAR EDP NUMBER	NPTF REGULAR EDP NUMBER	NPT INTERRUPTED EDP NUMBER	NPTF INTERRUPTED EDP NUMBER	1-11	12+
1/16 - 27	4	4"	46312	46313	-	-	\$40.71	\$37.01
1/16 - 27	4	6"	46314	46315	-	-	58.86	53.50
1/8 - 27	4	4"	46316	46317	-	-	37.01	33.65
1/8 - 27	4	6"	46318	46319	-	-	53.50	48.63
1/8 - 27	5	6"	-	-	46361	46363	69.70	63.37
1/4 - 18	4	4"	46322	46323	-	-	47.79	43.44
1/4 - 18	4	6"	46324	46325	-	-	60.91	55.36
1/4 - 18	5	6"	-	-	46366	46368	79.99	72.72
3/8 - 18	4	6"	46338	46339	-	-	73.90	67.19
3/8 - 18	5	6"	-	-	46371	46373	95.02	86.39
1/2 - 14	4	6"	46342	46343	-	-	109.57	99.61
1/2 - 14	5	6"	-	-	46376	46378	143.35	130.31
3/4 - 14	5	6"	46354	46355	-	-	162.78	147.98
3/4 - 14	5	6"	-	-	46381	46383	214.91	195.37

## 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	LIST PRICE		120B	LIST PRICE	
		NPS REGULAR EDP NUMBER	NPSF REGULAR EDP NUMBER	1-11	12+	NPS ECONOMY EDP NUMBER	1-11	12+
1/8 - 27	4	46941	46961	\$21.46	\$19.50	46901	\$17.37	\$15.79
1/8 - 27 sm sh*	4	46942	46962	21.46	19.50	46902	17.37	15.79
1/4 - 18	4	46943	46963	24.08	21.89	46903	19.65	17.87
3/8 - 18	4	46945	46965	30.77	27.97	46905	25.04	22.76
				LIST PRICE 1-2 3+			LIST PRICE 1-2 3+	
1/2 - 14	4	46947	46967	51.22	46.56	46907	41.68	37.88
3/4 - 14	5	46949	46969	74.27	67.52	46909	60.45	54.94
				LIST PRICE 1 OR MORE			LIST PRICE 1 OR MORE	
1 - 11 1/2	5	46951	46971	106.58		46911	86.52	
1 1/4 - 11 1/2	5	46953	46972	151.69		-	-	
1 1/2 - 11 1/2	7	46955	46974	204.95		-	-	
2 - 11 1/2	7	46957	46976	277.87		-	-	

\*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	LIST PRICE
<b>MACHINE SCREW SIZES</b>											
4 - 40	NC	H-2	2	1-7/8	3/8	1/4	.0910	.141	.110X3/16	16140	\$21.11
4 - 48	NF	H-2	2	1-7/8	3/8	1/4	.0945	.141	.110X3/16	16141	22.82
5 - 40	NC	H-2	2	1-15/16	13/32	9/32	.1040	.141	.110X3/16	16142	21.11
5 - 44	NF	H-2	2	1-15/16	13/32	9/32	.1060	.141	.110X3/16	16143	22.82
6 - 32	NC	H-3	2	2	7/16	5/16	.1110	.141	.110X3/16	16144	21.11
6 - 40	NF	H-2	2	2	7/16	5/16	.1170	.141	.110X3/16	16145	22.82
8 - 32	NC	H-3	2	2-1/8	1/2	3/8	.1375	.168	.131X1/4	16146	21.11
8 - 36	NF	H-2	2	2-1/8	1/2	3/8	.1405	.168	.131X1/4	16147	22.82
10 - 24	NC	H-3	2	2-3/8	5/8	13/32	.1545	.194	.152X1/4	16148	21.11
10 - 32	NF	H-3	2	2-3/8	5/8	13/32	.1635	.194	.152X1/4	16149	22.82
12 - 24	NC	H-3	2	2-3/8	21/32	15/32	.1805	.220	.165X9/32	16150	21.11
12 - 28	NF	H-3	2	2-3/8	21/32	15/32	.1860	.220	.165X9/32	16151	22.82
<b>FRACTIONAL SIZES</b>											
1/4 - 20	NC	H-5	2	2-1/2	25/32	17/32	.2080	.255	.191X5/16	16152	21.11
1/4 - 28	NF	H-4	2	2-1/2	25/32	17/32	.2200	.255	.191X5/16	16153	21.11
5/16 - 18	NC	H-5	2	2-27/32	15/16	11/16	.2660	.318	.238X3/8	16154	31.12
5/16 - 24	NF	H-4	2	2-27/32	15/16	11/16	.2770	.318	.238X3/8	16155	31.12
3/8 - 16	NC	H-5	2	3-3/8	1-1/16	13/16	.3225	.381	.286X7/16	16156	37.71
3/8 - 24	NF	H-4	2	3-3/8	1-1/16	13/16	.3395	.381	.286X7/16	16157	37.71
7/16 - 14	NC	H-5	2	3-3/4	1-1/4	1	.3770	.323	.242X13/32	16158	45.21
7/16 - 20	NF	H-5	2	3-3/4	1-1/4	1	.3955	.323	.242X13/32	16159	45.21
1/2 - 13	NC	H-5	2	4-1/16	1-3/8	1-1/8	.4350	.367	.275X7/16	16160	51.04
1/2 - 20	NF	H-5	2	4-1/16	1-3/8	1-1/8	.4580	.367	.275X7/16	16161	51.04
<b>METRIC SIZES</b>											
M3X0.5	-	D-3	2	1-15/16	13/32	9/32	.1015	.141	.110X3/16	16162	23.24
M3.5X0.6	-	D-4	2	2	7/16	5/16	.1178	.141	.110X3/16	16164	23.24
M4X0.7	-	D-4	2	2-1/8	1/2	3/8	.1340	.168	.131X1/4	16166	23.41
M5X0.8	-	D-4	2	2-3/8	5/8	13/32	.1700	.194	.152X1/4	16168	25.10
M6X1.0	-	D-5	2	2-1/2	25/32	17/32	.2030	.255	.191X5/16	16170	23.24
M8X1.0	-	D-5	2	2-27/32	15/16	11/16	.2820	.318	.238X3/8	16172	34.46
M8X1.25	-	D-5	2	2-27/32	15/16	11/16	.2730	.318	.238X3/8	16173	34.46
M10X1.25	-	D-5	2	3-3/8	1-1/16	13/16	.3521	.381	.286X7/16	16176	41.51
M10X1.5	-	D-6	2	3-3/8	1-1/16	13/16	.3440	.381	.286X7/16	16177	41.51
M12X1.25	-	D-5	2	4-1/16	1-3/8	1-1/8	.4310	.367	.275X7/16	16180	56.17
M12X1.75	-	D-6	2	4-1/16	1-3/8	1-1/8	.4140	.367	.275X7/16	16181	56.17

The Combined Taps and Drills are manufactured to produce a 65% Height of Thread.

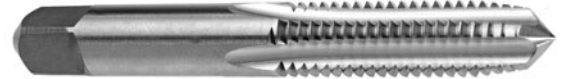
The Drill Point is 118° and the Spiral Flutes have approximately 22° Helix Angle.

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				LIST PRICE	
		H-1	H-2	H-3	H-4	H-1	H-2	H-3	H-4	1-11	12+
2 - 56	3	52014	52022			52013	52023			\$12.20	\$11.09
4 - 40	3	54012	54022			54013	54023			10.92	9.93
5 - 40	3	54112	54122			54113	54123			10.92	9.93
6 - 32	3		54222	54232			54223	54233		10.92	9.93
6 - 40	3	54312	54322			54313	54323			10.92	9.93
8 - 32	3		54422	54432			54423	54433		10.92	9.93
10 - 24	3		54522	54532			54523	54533		11.36	10.33
10 - 32	3		54622	54632			54623	54633		11.36	10.33
12 - 24	3		54722	54732			54723	54733		12.01	10.91
1/4 - 20	3		54822	54832			54823	54833		12.01	10.91
1/4 - 28	3		54922	54932			54923	54933		12.01	10.91
5/16 - 18	4			55032	55042			55033	55043	13.06	11.88
5/16 - 24	4		55122	55132			55123	55133		13.06	11.88
3/8 - 16	4			55232	55242			55233	55243	16.79	15.28
3/8 - 24	4		55322	55332			55323	55333		16.79	15.28
7/16 - 14	4			55432	55442			55433	55443	19.51	17.75
7/16 - 20	4			55532	55542			55533	55543	19.51	17.75
1/2 - 13	4			55632	55642			55633	55643	25.08	22.80
1/2 - 20	4			55732	55742			55733	55743	25.08	22.80
										LIST PRICE	
										1-2	3+
5/8 - 11	4			55752				55753		57.78	52.54
5/8 - 18	4			55762				55763		57.78	52.54
3/4 - 10	4			55772				55773		80.86	73.52
3/4 - 16	4			55782				55783		80.86	73.52
7/8 - 9	4				55792				55793	123.94	112.67
7/8 - 14	4				55802				55803	123.94	112.67
1 - 8	4				55812				55813	158.82	144.38
1 - 14	4				55822				55823	158.82	144.38

## STI SPIRAL POINT TAPS

LIST 131

Spiral Point Plug



TAP SIZE	NO. OF FLUTES	SPPT PLUG STI EDP NUMBER				LIST PRICE	
		H-1	H-2	H-3	H-4	1-11	12+
2 - 56	2	53014	53022			\$13.12	\$11.92
4 - 40	2	56012	56022			11.71	10.64
5 - 40	2	56112	56122			11.71	10.64
6 - 32	2		56222	56232		11.71	10.64
6 - 40	2	56312	56322			11.71	10.64
8 - 32	2		56422	56432		11.71	10.64
10 - 24	2		56522	56532		12.01	10.91
10 - 32	2		56622	56632		12.01	10.91
12 - 24	2		56722	56732		12.69	11.53
1/4 - 20	2		56822	56832		12.69	11.53
1/4 - 28	2		56922	56932		12.69	11.53
5/16 - 18	3			57032	57042	14.27	12.96
5/16 - 24	3		57122	57132		14.27	12.96
3/8 - 16	3			57232	57242	17.91	16.29
3/8 - 24	3		57322	57332		17.91	16.29
7/16 - 14	3			57432	57442	22.19	20.17
7/16 - 20	3			57532	57542	22.19	20.17
1/2 - 13	3			57632	57642	27.44	24.95
1/2 - 20	3			57732	57742	27.44	24.95

## STI FAST SPIRAL FLUTED TAPS

LIST 136

Plug  
Bottom



TAP SIZE	NO. OF FLUTES	PLUG STI EDP NUMBER				BOTTOM STI EDP NUMBER				LIST PRICE	
		H-1	H-2	H-3	H-4	H-1	H-2	H-3	H-4	1-11	12+
2 - 56	2	70012	70022			70013	70023			\$19.63	\$17.85
4 - 40	3	70112	70122			70113	70123			16.34	14.86
5 - 40	3	70212	70222			70213	70223			16.34	14.86
6 - 32	3		70322	70332			70323	70333		16.34	14.86
6 - 40	3	70412	70422			70413	70423			16.34	14.86
8 - 32	3		70522	70532			70523	70533		16.34	14.86
10 - 24	3		70622	70632			70623	70633		17.50	15.90
10 - 32	3		70722	70732			70723	70733		17.50	15.90
1/4 - 20	3		70822	70832			70823	70833		19.10	17.36
1/4 - 28	3		70922	70932			70923	70933		19.10	17.36
5/16 - 18	3			71032	71042			71033	71043	21.83	19.84
5/16 - 24	3		71122	71132			71123	71133		21.83	19.84
3/8 - 16	4			71232	71242			71233	71243	28.67	26.06
3/8 - 24	4		71322	71332			71323	71333		28.67	26.06
7/16 - 14	4			71432	71442			71433	71443	33.16	30.15
7/16 - 20	4			71532	71542			71533	71543	33.16	30.15
1/2 - 13	4			71632	71642			71633	71643	38.04	34.58
1/2 - 20	4			71732	71742			71733	71743	38.04	34.58

## METRIC STI STRAIGHT FLUTE TAPS

LIST 130M

Plug  
Bottom



TAP SIZE	NO. OF FLUTES	PLUG STI EDP NUMBER				BOTTOM STI EDP NUMBER				LIST PRICE	
		CLASS 4H 5H FIT		CLASS 5H FIT		CLASS 4H 5H FIT		CLASS 5H FIT		1-11	12+
M2.2X0.45	3	72012	D1	72012	D1	72013	D1	72013	D1	\$13.45	\$12.22
M2.5X0.45	3	72112	D1	72112	D1	72113	D1	72113	D1	13.45	12.22
M3X0.5	3	72212	D1	72212	D1	72213	D1	72213	D1	12.00	10.90
M3.5X0.6	3	72312	D1	72322	D2	72313	D1	72323	D2	12.00	10.90
M4X0.7	3	72412	D1	72422	D2	72413	D1	72423	D2	12.00	10.90
M5X0.8	3	72512	D1	72522	D2	72513	D1	72523	D2	12.46	11.33
M6X1.0	3	72622	D2	72632	D3	72623	D2	72633	D3	13.19	12.00
M8X1.0	4	72722	D2	72732	D3	72723	D2	72733	D3	14.35	13.04
M8X1.25	4	72822	D2	72832	D3	72823	D2	72833	D3	14.35	13.04
M10X1.0	4	72922	D2	72932	D3	72923	D2	72933	D3	19.51	17.75
M10X1.25	4	73022	D2	73032	D3	73023	D2	73033	D3	19.51	17.75
M10X1.5	4	73132	D3	73142	D4	73133	D3	73143	D4	19.51	17.75
M12X1.25	4	73232	D3	73242	D4	73233	D3	73243	D4	27.56	25.06
M12X1.5	4	73332	D3	73352	D5	73333	D3	73353	D5	27.56	25.06
M12X1.75	4	73432	D3	73452	D5	73433	D3	73453	D5	27.56	25.06
										LIST PRICE 1-2      3+	
M14X2.0	4	73542	D4	73552	D5	73543	D4	73553	D5	46.20	42.00
M14X1.5	4	73632	D3	73652	D5	73633	D3	73653	D5	46.20	42.00
M16X2.0	4	73742	D4	73752	D5	73743	D4	73753	D5	57.78	52.54
M16X1.5	4	73832	D3	73852	D5	73833	D3	73853	D5	57.78	52.54
M18X2.5	4	73942	D4	73962	D6	73943	D4	73963	D6	63.53	57.76
M18X1.5	4	74032	D3	74052	D5	74033	D3	74053	D5	63.53	57.76
M20X2.5	4	74142	D4	74162	D6	74143	D4	74163	D6	80.86	73.52

## METRIC STI SPIRAL POINT TAPS

LIST 131M

Spiral Point Plug



TAP SIZE	NO. OF FLUTES	SPPT PLUG STI EDP NUMBER				LIST PRICE	
		CLASS 4H 5H FIT		CLASS 5H FIT		1-11	12+
M2.2X0.45	2	72017	D1	72017	D1	\$14.41	\$13.09
M2.5X0.45	2	72117	D1	72117	D1	14.41	13.09
M3X0.5	2	72217	D1	72217	D1	12.88	11.71
M3.5X0.6	2	72317	D1	72327	D2	12.88	11.71
M4X0.7	2	72417	D1	72427	D2	12.88	11.71
M5X0.8	2	72517	D1	72527	D2	13.19	12.00
M6X1.0	2	72627	D2	72637	D3	13.92	12.65
M8X1.0	3	72727	D2	72737	D3	15.72	14.28
M8X1.25	3	72827	D2	72837	D3	15.72	14.28
M10X1.0	3	72927	D2	72937	D3	22.19	20.17
M10X1.25	3	73027	D2	73037	D3	22.19	20.17
M10X1.5	3	73137	D3	73147	D4	22.19	20.17
M12X1.25	3	73237	D3	73247	D4	30.16	27.41
M12X1.5	3	73337	D3	73357	D5	30.16	27.41
M12X1.75	3	73437	D3	73457	D5	30.16	27.41

## METRIC STI FAST SPIRAL FLUTED TAPS

LIST 136M

Plug Bottom



TAP SIZE	NO. OF FLUTES	PLUG STI EDP NUMBER				BOTTOM STI EDP NUMBER				LIST PRICE	
		CLASS 4H 5H FIT		CLASS 5H FIT		CLASS 4H 5H FIT		CLASS 5H FIT		1-11	12+
M2.2X0.45	2	72018	D1	72018	D1	72019	D1	72019	D1	\$21.61	\$19.64
M2.5X0.45	2	72118	D1	72118	D1	72119	D1	72119	D1	21.61	19.64
M3X0.5	3	72218	D1	72218	D1	72219	D1	72219	D1	17.96	16.32
M3.5X0.6	3	72318	D1	72328	D2	72319	D1	72329	D2	17.96	16.32
M4X0.7	3	72418	D1	72428	D2	72419	D1	72429	D2	17.96	16.32
M5X0.8	3	72518	D1	72528	D2	72519	D1	72529	D2	19.24	17.50
M6X1.0	3	72628	D2	72638	D3	72629	D2	72639	D3	21.01	19.10
M8X1.0	3	72728	D2	72738	D3	72729	D2	72739	D3	24.06	21.87
M8X1.25	3	72828	D2	72838	D3	72829	D2	72839	D3	24.06	21.87
M10X1.0	4	72928	D2	72938	D3	72929	D2	72939	D3	31.53	28.66
M10X1.25	4	73028	D2	73038	D3	73029	D2	73039	D3	31.53	28.66
M10X1.5	4	73138	D3	73148	D4	73139	D3	73149	D4	31.53	28.66
M12X1.25	4	73238	D3	73248	D4	73239	D3	73249	D4	41.84	38.04
M12X1.5	4	73338	D3	73358	D5	73339	D3	73359	D5	41.84	38.04
M12X1.75	4	73438	D3	73458	D5	73439	D3	73459	D5	41.84	38.04

## 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)
<b>(FINE SERIES)</b>					
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	H LIMIT	HOLE SIZE		H LIMIT	H LIMIT	HOLE SIZE		H LIMIT	H LIMIT	HOLE SIZE		
			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-6	.2916	.2934	.2955	H-5	.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									LIST PRICE				
			H-2	H-3	H-4	H-5	H-6	H-7	H-8	H-9	H-10	1-11	12-47	48-143	144-479	480+
0 - 80	NF	PLUG	58022	58032	58042	58052	58062	58072				\$24.24	\$22.53	\$21.13	\$20.06	\$18.89
0 - 80	NF	BOTT	58023	58033	58043	58053	58063	58073				24.24	22.53	21.13	20.06	18.89
1 - 64	NC	PLUG	58122	58132	58142	58152	58162	58172				24.24	22.53	21.13	20.06	18.89
1 - 64	NC	BOTT	58123	58133	58143	58153	58163	58173				24.24	22.53	21.13	20.06	18.89
1 - 72	NF	PLUG	58222	58232	58242	58252	58262	58272				24.24	22.53	21.13	20.06	18.89
1 - 72	NF	BOTT	58223	58233	58243	58253	58263	58273				24.24	22.53	21.13	20.06	18.89
2 - 56	NC	PLUG	58322	58332	58342	58352	58362	58372				24.08	21.79	20.49	19.51	18.51
2 - 56	NC	BOTT	58323	58333	58343	58353	58363	58373				24.08	21.79	20.49	19.51	18.51
2 - 64	NF	PLUG	58422	58432	58442	58452	58462	58472				24.08	21.79	20.49	19.51	18.51
2 - 64	NF	BOTT	58423	58433	58443	58453	58463	58473				24.08	21.79	20.49	19.51	18.51
3 - 48	NC	PLUG	58522	58532	58542	58552	58562	58572				24.08	21.79	20.49	19.51	18.51
3 - 48	NC	BOTT	58523	58533	58543	58553	58563	58573				24.08	21.79	20.49	19.51	18.51
3 - 56	NF	PLUG	58622	58632	58642	58652	58662	58672				24.08	21.79	20.49	19.51	18.51
3 - 56	NF	BOTT	58623	58633	58643	58653	58663	58673				24.08	21.79	20.49	19.51	18.51
4 - 40	NC	PLUG	58722	58732	58742	58752	58762	58772				22.90	20.68	19.40	18.71	17.15
4 - 40	NC	BOTT	58723	58733	58743	58753	58763	58773				22.90	20.68	19.40	18.71	17.15
4 - 48	NF	PLUG	58822	58832	58842	58852	58862	58872				22.90	20.68	19.40	18.71	17.15
4 - 48	NF	BOTT	58823	58833	58843	58853	58863	58873				22.90	20.68	19.40	18.71	17.15
5 - 40	NC	PLUG	58922	58932	58942	58952	58962	58972				22.90	20.68	19.40	18.71	17.15
5 - 40	NC	BOTT	58923	58933	58943	58953	58963	58973				22.90	20.68	19.40	18.71	17.15
5 - 44	NF	PLUG	59022	59032	59042	59052	59062	59072				22.90	20.68	19.40	18.71	17.15
5 - 44	NF	BOTT	59023	59033	59043	59053	59063	59073				22.90	20.68	19.40	18.71	17.15
6 - 32	NC	PLUG	59122	59132	59142	59152	59162	59172	59182	59192	59194	18.71	16.69	15.86	14.73	14.23
6 - 32	NC	BOTT	59123	59133	59143	59153	59163	59173	59183	59193	59195	18.71	16.69	15.86	14.73	14.23
6 - 40	NF	PLUG	59222	59232	59242	59252	59262	59272	59282	59292	59294	18.71	16.69	15.86	14.73	14.23
6 - 40	NF	BOTT	59223	59233	59243	59253	59263	59273	59283	59293	59295	18.71	16.69	15.86	14.73	14.23
8 - 32	NC	PLUG	59322	59332	59342	59352	59362	59372	59382	59392	59394	18.71	16.69	15.86	14.73	14.23
8 - 32	NC	BOTT	59323	59333	59343	59353	59363	59373	59383	59393	59395	18.71	16.69	15.86	14.73	14.23
8 - 36	NF	PLUG	59422	59432	59442	59452	59462	59472	59482	59492	59494	18.71	16.69	15.86	14.73	14.23
8 - 36	NF	BOTT	59423	59433	59443	59453	59463	59473	59483	59493	59495	18.71	16.69	15.86	14.73	14.23
10 - 24	NC	PLUG	59522	59532	59542	59552	59562	59572	59582	59592	59594	18.71	16.69	15.86	14.73	14.23
10 - 24	NC	BOTT	59523	59533	59543	59553	59563	59573	59583	59593	59595	18.71	16.69	15.86	14.73	14.23
10 - 32	NF	PLUG	59622	59632	59642	59652	59662	59672	59682	59692	59694	18.71	16.69	15.86	14.73	14.23
10 - 32	NF	BOTT	59623	59633	59643	59653	59663	59673	59683	59693	59695	18.71	16.69	15.86	14.73	14.23
12 - 24	NC	PLUG	59722	59732	59742	59752	59762	59772	59782	59792	59794	19.40	17.36	16.99	15.86	15.38
12 - 24	NC	BOTT	59723	59733	59743	59753	59763	59773	59783	59793	59795	19.40	17.36	16.99	15.86	15.38
12 - 28	NF	PLUG	59822	59832	59842	59852	59862	59872	59882	59892	59894	19.40	17.36	16.99	15.86	15.38
12 - 28	NF	BOTT	59823	59833	59843	59853	59863	59873	59883	59893	59895	19.40	17.36	16.99	15.86	15.38

**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									LIST PRICE				
			H-2	H-3	H-4	H-5	H-6	H-7	H-8	H-9	H-10	1-11	12-47	48-143	144-479	480+
1/4 - 20	NC	PLUG	59922	59932	59942	59952	59962	59972	59982	59992	59994	\$19.40	\$17.36	\$16.99	\$15.86	\$15.38
1/4 - 20	NC	BOTT	59923	59933	59943	59953	59963	59973	59983	59993	59995	19.40	17.36	16.99	15.86	15.38
1/4 - 28	NF	PLUG	60022	60032	60042	60052	60062	60072	60082	60092	60094	19.40	17.36	16.99	15.86	15.38
1/4 - 28	NF	BOTT	60023	60033	60043	60053	60063	60073	60083	60093	60095	19.40	17.36	16.99	15.86	15.38
5/16 - 18	NC	PLUG	60122	60132	60142	60152	60162	60172	60182	60192	60194	22.27	20.07	19.55	18.51	17.81
5/16 - 18	NC	BOTT	60123	60133	60143	60153	60163	60173	60183	60193	60195	22.27	20.07	19.55	18.51	17.81
5/16 - 24	NF	PLUG	60222	60232	60242	60252	60262	60272	60282	60292	60294	22.27	20.07	19.55	18.51	17.81
5/16 - 24	NF	BOTT	60223	60233	60243	60253	60263	60273	60283	60293	60295	22.27	20.07	19.55	18.51	17.81
			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	24.92	22.69	21.60	20.07	19.40
3/8 - 16	NC	BOTT	60443	60453	60463	60473	60483	60493	60495	60497	60499	24.92	22.69	21.60	20.07	19.40
3/8 - 24	NF	PLUG	60642	60652	60662	60672	60682	60692	60694	60696	60698	24.92	22.69	21.60	20.07	19.40
3/8 - 24	NF	BOTT	60643	60653	60663	60673	60683	60693	60695	60697	60699	24.92	22.69	21.60	20.07	19.40
7/16 - 14	NC	PLUG	60842	60852	60862	60872	60882	60892	60894	60896	60898	37.30	34.37	32.60	30.59	29.65
7/16 - 14	NC	BOTT	60843	60853	60863	60873	60883	60893	60895	60897	60899	37.30	34.37	32.60	30.59	29.65
7/16 - 20	NF	PLUG	61042	61052	61062	61072	61082	61092	61094	61096	61098	37.30	34.37	32.60	30.59	29.65
7/16 - 20	NF	BOTT	61043	61053	61063	61073	61083	61093	61095	61097	61099	37.30	34.37	32.60	30.59	29.65
1/2 - 13	NC	PLUG	61242	61252	61262	61272	61282	61292	61294	61296	61298	43.58	39.54	37.55	35.52	33.68
1/2 - 13	NC	BOTT	61243	61253	61263	61273	61283	61293	61295	61297	61299	43.58	39.54	37.55	35.52	33.68
1/2 - 20	NF	PLUG	61442	61452	61462	61472	61482	61492	61494	61496	61498	43.58	39.54	37.55	35.52	33.68
1/2 - 20	NF	BOTT	61443	61453	61463	61473	61483	61493	61495	61497	61499	43.58	39.54	37.55	35.52	33.68
9/16 - 12	NC	PLUG	61642	61652	61662	61672	61682	61692	61694	61696	61698	62.70	56.61	53.92	53.92	53.92
9/16 - 12	NC	BOTT	61643	61653	61663	61673	61683	61693	61695	61697	61699	62.70	56.61	53.92	53.92	53.92
9/16 - 18	NF	PLUG	61842	61852	61862	61872	61882	61892	61894	61896	61898	62.70	56.61	53.92	53.92	53.92
9/16 - 18	NF	BOTT	61843	61853	61863	61873	61883	61893	61895	61897	61899	62.70	56.61	53.92	53.92	53.92
5/8 - 11	NC	PLUG	62042	62052	62062	62072	62082	62092	62094	62096	62098	65.65	59.52	56.61	56.61	56.61
5/8 - 11	NC	BOTT	62043	62053	62063	62073	62083	62093	62095	62097	62099	65.65	59.52	56.61	56.61	56.61
5/8 - 18	NF	PLUG	62242	62252	62262	62272	62282	62292	62294	62296	62298	65.65	59.52	56.61	56.61	56.61
5/8 - 18	NF	BOTT	62243	62253	62263	62273	62283	62293	62295	62297	62299	65.65	59.52	56.61	56.61	56.61
3/4 - 10	NC	PLUG			62412	62422	62432	62442	62452		62472	83.60	75.67	72.10	72.10	72.10
3/4 - 10	NC	BOTT			62413	62423	62433	62443	62453		62473	83.60	75.67	72.10	72.10	72.10
3/4 - 16	NF	PLUG			62512	62522	62532	62542	62552		62572	83.60	75.67	72.10	72.10	72.10
3/4 - 16	NF	BOTT			62513	62523	62533	62543	62553		62573	83.60	75.67	72.10	72.10	72.10

**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		LIST PRICE				
	CLASS 6H FIT	CLASS 4H FIT	PLUG EDP NUMBER	BOTTOM EDP NUMBER	1-11	12-47	48-143	144-479	480-999
M2X0.4	D5		62611	62612	\$27.68	\$25.05	\$23.74	\$22.45	\$20.30
M2X0.4		D3	62613	62614	27.68	25.05	23.74	22.45	20.30
M2.5X0.45	D6		62617	62618	27.68	25.05	23.74	22.45	20.30
M2.5X0.45		D3	62619	62620	27.68	25.05	23.74	22.45	20.30
M3X0.5	D6		62621	62622	26.03	23.90	22.13	21.27	18.64
M3X0.5		D3	62623	62624	26.03	23.90	22.13	21.27	18.64
M3.5X0.6	D7		62627	62628	21.27	18.98	18.32	16.88	15.57
M3.5X0.6		D4	62629	62630	21.27	18.98	18.32	16.88	15.57
M4X0.7	D7		62631	62632	21.27	18.98	18.32	16.88	15.57
M4X0.7		D4	62633	62634	21.27	18.98	18.32	16.88	15.57
M5X0.8	D8		62637	62638	22.13	20.13	19.47	18.32	16.88
M5X0.8		D4	62639	62640	22.13	20.13	19.47	18.32	16.88
M6X1.0	D9		62641	62642	22.13	20.13	19.47	18.32	16.88
M6X1.0		D5	62643	62644	22.13	20.13	19.47	18.32	16.88
M8X1.25	D10		62647	62648	25.36	23.08	22.45	21.11	19.47
M8X1.25		D5	62649	62650	25.36	23.08	22.45	21.11	19.47
M10X1.5	D11		62651	62652	28.63	25.83	24.88	23.08	21.11
M10X1.5		D6	62653	62654	28.63	25.83	24.88	23.08	21.11

## 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				LIST PRICE		SET PRICE
			TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	SET EDP NUMBER	1-2	3+	
M14X1.25	4	H-3	35031	35032	35033	35030	\$25.14	\$22.85	\$68.55
M18X1.5	4	H-3	35131	35132	35133	35130	45.12	41.02	123.06

## METRIC HAND TAPS

### LIST 100M CLASS 6H FIT

Taper  
Plug  
Bottom



TAP SIZE	PITCH DIAMETER LIMIT	NO. OF FLUTES	100M				LIST PRICE	SET PRICE
			TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	SET EDP NUMBER		
M1.6X0.35	D3	2	62702	62700	62701	62703	\$13.14	\$39.42
M1.8X0.35	D2	2	62706	62704	62705	62707	13.14	39.42
M2X0.4	D3	3	62710	62708	62709	62717	12.64	37.92
M2.2X0.45	D2	3	62711	62712	62713	62724	12.64	37.92
M2.5X0.45	D3	3	62716	62714	62715	62728	10.55	31.65
M3X0.5	D3	3	62720	62718	62719	62732	8.74	26.22
M3.5X0.6	D4	3	62721	62722	62723	62736	7.27	21.81
M4X0.7	D4	4	62725	62726	62727	62740	7.27	21.81
M4.5X0.75	D4	4	62729	62730	62731	62744	7.27	21.81
M5X0.8	D4	4	62733	62734	62735	62748	7.27	21.81
M6X1.0	D5	4	62737	62738	62739	62752	7.87	23.61
M6.3X1.0	D5	4	62741	62742	62743	62756	7.87	23.61
M7X1.0	D5	4	62745	62746	62747	62760	8.54	25.62
M8X1.25	D5	4	62749	62750	62751	62764	8.54	25.62
M10X1.5	D6	4	62753	62754	62755	62768	16.38	49.14
M12X1.75	D6	4	62757	62758	62759	62769	19.72	59.16
M14X2.0	D7	4	62761	62762	62763	62794	29.44	88.32
M16X2.0	D7	4	62765	62766	62767	62795	37.30	111.90
M18X2.5	D7	4	62772	62770	62771	62796	48.40	145.20
M20X2.5	D7	4	62773	62774	62775	62797	65.93	197.79
M22X2.5	D6	4	62776	62777	62778	62798	68.91	206.73
M24X3.0	D8	4	62779	62780	62781	62799	76.06	228.18
M27X3.0	D9	4	62782	62783	62784	62801	112.67	338.01
M30X3.5	D9	4	62785	62786	62787	62802	144.38	433.14
M33X3.5	D9	4	62788	62789	62790	62803	180.68	542.04
M36X4.0	D9	4	62791	62792	62793	62805	223.08	669.24

## 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			LIST PRICE		
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	1-11	12-23	24+
M1.5X0.35	D1	2	#0	81001	81002	81003	\$26.76	\$21.18	\$17.19
M1.5X0.35	D2	2	#0	81007	81008	81009	26.76	21.18	17.19
M1.6X0.35	D1	2	#0	81011	81012	81013	26.76	21.18	17.19
M1.6X0.35	D2	2	#0	81017	81018	81019	26.76	21.18	17.19
M1.8X0.35	D1	2	#1	81027	81028	81029	25.36	19.96	15.76
M2X0.45	D1	3	#2	81051	81052	81053	24.22	19.16	15.21
M2X0.45	D2	3	#2	81057	81058	81059	24.22	19.16	15.21
M2X0.4	D1	3	#2	81037	81038	81039	24.22	19.16	15.21
M2X0.4	D2	3	#2	81041	81042	81043	24.22	19.16	15.21
M2.2X0.45	D1	3	#2	81061	81062	81063	24.22	19.16	15.21
M2.3X0.4	D1	2	#3	81071	81072	81073	20.89	15.76	12.10
M2.3X0.4	D2	2	#3	81077	81078	81079	20.89	15.76	12.10
M2.5X0.45	D1	3	#3	81081	81082	81083	20.89	15.76	12.10
M2.5X0.45	D2	3	#3	81087	81088	81089	20.89	15.76	12.10
M2.6X0.45	D1	3	#3	81097	81098	81099	20.89	15.76	12.10
M2.6X0.45	D2	3	#3	81101	81102	81103	20.89	15.76	12.10
M3X0.6	D1	3	#5	81121	81122	81123	18.32	13.24	9.88
M3X0.6	D2	3	#5	81127	81128	81129	18.32	13.24	9.88
M3X0.5	D1	3	#5	81107	81108	81109	18.32	13.24	9.88
M3X0.5	D2	3	#5	81111	81112	81113	18.32	13.24	9.88
M3.5X0.6	D1	3	#6	81131	81132	81133	16.90	11.53	8.49
M3.5X0.6	D2	3	#6	81137	81138	81139	16.90	11.53	8.49
M4X0.75	D2	4	#8	81161	81162	81163	16.90	11.53	8.49
M4X0.75	D3	4	#8	81167	81168	81169	16.90	11.53	8.49
M4X0.7	D2	4	#8	81147	81148	81149	16.90	11.53	8.49
M4X0.7	D3	4	#8	81151	81152	81153	16.90	11.53	8.49
M4.5X0.75	D2	4	#10	81171	81172	81173	16.90	11.53	8.49
M4.5X0.75	D3	4	#10	81177	81178	81179	16.90	11.53	8.49
M5X1.0	D2	4	#10	81211	81212	81213	16.90	11.53	8.49
M5X1.0	D3	4	#10	81217	81218	81219	16.90	11.53	8.49
M5X0.9	D2	4	#10	81201	81202	81203	16.90	11.53	8.49
M5X0.9	D3	4	#10	81207	81208	81209	16.90	11.53	8.49
M5X0.8	D2	4	#10	81187	81188	81189	16.90	11.53	8.49
M5X0.8	D3	4	#10	81191	81192	81193	16.90	11.53	8.49
M5.5X0.9	D2	4	#12	81221	81222	81223	18.57	13.24	9.54
M5.5X0.9	D3	4	#12	81227	81228	81229	18.57	13.24	9.54

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			LIST PRICE		
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	1-11	12-23	24+
M6X1.0	D3	4	1/4"	81241	81242	81243	\$18.32	\$13.24	\$9.54
M6X0.75	D2	4	1/4"	81231	81232	81233	18.32	13.24	9.54
M6X0.75	D3	4	1/4"	81237	81238	81239	18.32	13.24	9.54
M7X1.0	D3	4	5/16"	81261	81262	81263	19.43	13.85	10.43
M7X0.75	D2	4	5/16"	81251	81252	81253	19.43	13.85	10.43
M7X0.75	D4	4	5/16"	81257	81258	81259	19.43	13.85	10.43
M8X1.25	D3	4	5/16"	81281	81282	81283	19.43	13.85	10.43
M8X1.0	D3	4	5/16"	81271	81272	81273	19.43	13.85	10.43
M8X1.0	D5	4	5/16"	81277	81278	81279	19.43	13.85	10.43
M9X1.25	D3	4	3/8"	81301	81302	81303	21.40	15.76	12.09
M9X1.25	D5	4	3/8"	81307	81308	81309	21.40	15.76	12.09
M9X1.0	D3	4	3/8"	81291	81292	81293	21.40	15.76	12.09
M9X1.0	D5	4	3/8"	81297	81298	81299	21.40	15.76	12.09
M10X1.5	D3	4	3/8"	81331	81332	81333	29.21	22.32	17.64
M10X1.5	D5	4	3/8"	81337	81338	81339	29.21	22.32	17.64
M10X1.25	D3	4	3/8"	81321	81322	81323	29.21	22.32	17.64
M10X1.25	D5	4	3/8"	81327	81328	81329	29.21	22.32	17.64
M10X1.0	D3	4	3/8"	81311	81312	81313	29.21	22.32	17.64
M10X1.0	D5	4	3/8"	81317	81318	81319	29.21	22.32	17.64
M11X1.5	D3	4	7/16"	81344	81345	81346	29.21	22.32	17.64
M11X1.5	D5	4	7/16"	81347	81348	81349	29.21	22.32	17.64
M12X1.75	D3	4	1/2"	81371	81372	81373	32.36	26.05	23.34
M12X1.75	D5	4	1/2"	81377	81378	81379	32.36	26.05	23.34
M12X1.5	D3	4	1/2"	81361	81362	81363	32.36	26.05	23.34
M12X1.5	D5	4	1/2"	81367	81368	81369	32.36	26.05	23.34
M12X1.25	D3	4	1/2"	81351	81352	81353	32.36	26.05	23.34
M12X1.25	D5	4	1/2"	81357	81358	81359	32.36	26.05	23.34
M14X2.0	D3	4	9/16"	81407	81408	81409	36.14	32.36	29.44
M14X2.0	D5	4	9/16"	81411	81412	81413	36.14	32.36	29.44
M14X1.5	D3	4	9/16"	81397	81398	81399	36.14	32.36	29.44
M14X1.5	D5	4	9/16"	81401	81402	81403	36.14	32.36	29.44
M14X1.25	D5	4	9/16"	81391	81392	81393	36.14	32.36	29.44
M15X1.5	D3	4	5/8"	81421	81422	81423	42.42	37.72	37.30
M15X1.5	D5	4	5/8"	81427	81428	81429	42.42	37.72	37.30

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			LIST PRICE		
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	1-5	6-11	12+
M16X2.0	D4	4	5/8"	81441	81442	81443	\$42.42	\$37.72	\$37.30
M16X2.0	D6	4	5/8"	81447	81448	81449	42.42	37.72	37.30
M16X1.5	D3	4	5/8"	81431	81432	81433	42.42	37.72	37.30
M16X1.5	D5	4	5/8"	81437	81438	81439	42.42	37.72	37.30
M17X1.5	D3	4	11/16"	81547	81548	81549	48.30	43.95	40.61
M17X1.5	D5	4	11/16"	81551	81552	81553	48.30	43.95	40.61
M18X2.5	D4	4	11/16"	81577	81578	81579	54.73	50.04	48.40
M18X2.5	D6	4	11/16"	81581	81582	81583	54.73	50.04	48.40
M18X2.0	D4	4	11/16"	81567	81568	81569	54.73	50.04	48.40
M18X2.0	D6	4	11/16"	81571	81572	81573	54.73	50.04	48.40
M18X1.5	D5	4	11/16"	81561	81562	81563	54.73	50.04	48.40
M19X2.5	D4	4	3/4"	81591	81592	81593	54.73	50.04	48.40
M19X2.5	D6	4	3/4"	81597	81598	81599	54.73	50.04	48.40
M20X2.5	D4	4	13/16"	81621	81622	81623	71.25	68.78	65.93
M20X2.5	D6	4	13/16"	81627	81628	81629	71.25	68.78	65.93
M20X2.0	D4	4	13/16"	81611	81612	81613	71.25	68.78	65.93
M20X2.0	D6	4	13/16"	81617	81618	81619	71.25	68.78	65.93
M20X1.5	D3	4	13/16"	81601	81602	81603	71.25	68.78	65.93
M20X1.5	D5	4	13/16"	81607	81608	81609	71.25	68.78	65.93
M22X2.5	D4	4	7/8"	81657	81658	81659	74.43	70.68	68.91
M22X2.0	D4	4	7/8"	81647	81648	81649	74.43	70.68	68.91
M22X2.0	D6	4	7/8"	81651	81652	81653	74.43	70.68	68.91
M22X1.5	D3	4	7/8"	81637	81638	81639	74.43	70.68	68.91
M22X1.5	D5	4	7/8"	81641	81642	81643	74.43	70.68	68.91
M24X3.0	D4	4	15/16"	81687	81688	81689	78.34	77.72	76.06
M24X2.0	D4	4	15/16"	81677	81678	81679	78.34	77.72	76.06
M24X2.0	D8	4	15/16"	81681	81682	81683	78.34	77.72	76.06
M24X1.5	D3	4	15/16"	81667	81668	81669	78.34	77.72	76.06
M24X1.5	D5	4	15/16"	81671	81672	81673	78.34	77.72	76.06
M25X2.0	D4	4	1"	81707	81708	81709	95.71	88.66	85.13
M25X2.0	D8	4	1"	81711	81712	81713	95.71	88.66	85.13
M25X1.5	D3	4	1"	81697	81698	81699	95.71	88.66	85.13
M25X1.5	D5	4	1"	81701	81702	81703	95.71	88.66	85.13
M26X3.0	D5	4	1-1/16"	81717	81718	81719	123.33	115.99	112.67
M26X3.0	D9	4	1-1/16"	81721	81722	81723	123.33	115.99	112.67
M27X3.0	D5	4	1-1/16"	81737	81738	81739	123.33	115.99	112.67

## 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			LIST PRICE		
				TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	1-5	6-11	12+
M27X2.0	D5	4	1-1/16"	81727	81728	81729	\$123.33	\$115.99	\$112.67
M27X2.0	D7	4	1-1/16"	81731	81732	81733	123.33	115.99	112.67
M28X3.0	D5	4	1-1/8"	81757	81758	81759	123.33	115.99	112.67
M28X3.0	D9	4	1-1/8"	81761	81762	81763	123.33	115.99	112.67
M28X2.0	D5	4	1-1/8"	81747	81748	81749	123.33	115.99	112.67
M28X2.0	D7	4	1-1/8"	81751	81752	81753	123.33	115.99	112.67
M30X3.5	D5	4	1-3/16"	81787	81788	81789	155.19	147.81	144.38
M30X3.0	D5	4	1-3/16"	81777	81778	81779	155.19	147.81	144.38
M30X3.0	D9	4	1-3/16"	81781	81782	81783	155.19	147.81	144.38
M30X2.0	D5	4	1-3/16"	81767	81768	81769	155.19	147.81	144.38
M30X2.0	D7	4	1-3/16"	81771	81772	81773	155.19	147.81	144.38
M32X3.5	D5	4	1-1/4"	81807	81808	81809	155.19	147.81	144.38
M32X3.5	D9	4	1-1/4"	81811	81812	81813	155.19	147.81	144.38
M32X2.0	D5	6	1-1/4"	81797	81798	81799	155.19	147.81	144.38
M32X2.0	D7	6	1-1/4"	81801	81802	81803	155.19	147.81	144.38
M33X3.5	D5	4	1-5/16"	81837	81838	81839	189.07	181.37	180.68
M33X3.0	D5	4	1-5/16"	81827	81828	81829	189.07	181.37	180.68
M33X3.0	D9	4	1-5/16"	81831	81832	81833	189.07	181.37	180.68
M33X2.0	D5	4	1-5/16"	81817	81818	81819	189.07	181.37	180.68
M33X2.0	D9	4	1-5/16"	81821	81822	81823	189.07	181.37	180.68
M34X3.5	D5	4	1-3/8"	81847	81848	81849	189.07	181.37	180.68
M34X3.5	D9	4	1-3/8"	81851	81852	81853	189.07	181.37	180.68
M36X4.0	D5	4	1-7/16"	81877	81878	81879	230.79	226.14	223.08
M36X3.0	D5	4	1-7/16"	81867	81868	81869	230.79	226.14	223.08
M36X3.0	D9	4	1-7/16"	81871	81872	81873	230.79	226.14	223.08
M36X2.0	D5	4	1-7/16"	81857	81858	81859	230.79	226.14	223.08
M36X2.0	D7	4	1-7/16"	81861	81862	81863	230.79	226.14	223.08
M38X4.0	D5	4	1-1/2"	81887	81888	81889	230.79	226.14	223.08
M38X4.0	D9	4	1-1/2"	81891	81892	81893	230.79	226.14	223.08
M39X4.0	D6	6	1-5/8"	81917	81918	81919	286.40	277.11	275.89
M39X4.0	D10	6	1-5/8"	81921	81922	81923	286.40	277.11	275.89
M39X3.0	D6	6	1-5/8"	81901	81902	81903	286.40	277.11	275.89
M39X3.0	D8	6	1-5/8"	81907	81908	81909	286.40	277.11	275.89
M39X3.0	D9	6	1-5/8"	81911	81912	81913	286.40	277.11	275.89
M39X2.0	D6	6	1-5/8"	81897	81898	81899	286.40	277.11	275.89

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	LIST PRICE		
				SPPT PLUG EDP NUMBER	1-11	12-23	24+
M2X0.45	D1	2	#2	82052	\$26.82	\$21.75	\$17.81
M2X0.45	D2	2	#2	82058	26.82	21.75	17.81
M2X0.4	D1	2	#2	82038	26.82	21.75	17.81
M2X0.4	D2	2	#2	82042	26.82	21.75	17.81
M2.2X0.45	D1	2	#2	82062	26.82	21.75	17.81
M2.3X0.4	D1	2	#3	82072	22.85	17.75	14.09
M2.3X0.4	D2	2	#3	82078	22.85	17.75	14.09
M2.5X0.45	D1	2	#3	82082	22.85	17.75	14.09
M2.5X0.45	D2	2	#3	82088	22.85	17.75	14.09
M2.6X0.45	D1	2	#3	82098	22.85	17.75	14.09
M2.6X0.45	D2	2	#3	82102	22.85	17.75	14.09
M3X0.6	D1	2	#5	82122	20.31	15.21	11.88
M3X0.6	D2	2	#5	82128	20.31	15.21	11.88
M3X0.5	D1	2	#5	82108	20.31	15.21	11.88
M3X0.5	D2	2	#5	82112	20.31	15.21	11.88
M3.5X0.6	D1	2	#6	82132	18.33	12.96	9.93
M3.5X0.6	D2	2	#6	82138	18.33	12.96	9.93
M4X0.75	D2	2	#8	82162	18.33	12.96	9.93
M4X0.75	D3	2	#8	82168	18.33	12.96	9.93
M4X0.7	D2	2	#8	82148	18.33	12.96	9.93
M4X0.7	D3	2	#8	82152	18.33	12.96	9.93
M4.5X0.75	D2	2	#10	82172	18.33	12.96	9.93
M4.5X0.75	D3	2	#10	82178	18.33	12.96	9.93
M5X1.0	D2	2	#10	82212	18.33	12.96	9.93
M5X1.0	D3	2	#10	82218	18.33	12.96	9.93
M5X0.9	D2	2	#10	82202	18.33	12.96	9.93
M5X0.9	D3	2	#10	82208	18.33	12.96	9.93
M5X0.8	D2	2	#10	82192	18.33	12.96	9.93
M5X0.8	D3	2	#10	82194	18.33	12.96	9.93
M5.5X0.9	D2	2	#12	82222	20.01	14.68	10.99
M5.5X0.9	D3	2	#12	82228	20.01	14.68	10.99
M6X1.0	D3	2	1/4"	82242	19.76	14.68	10.99
M6X0.75	D2	2	1/4"	82232	19.76	14.68	10.99
M6X0.75	D3	2	1/4"	82238	19.76	14.68	10.99
M7X1.0	D3	2	5/16"	82262	21.40	15.83	12.43
M7X0.75	D2	2	5/16"	82252	21.40	15.83	12.43

## 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	LIST PRICE		
				SPPT PLUG EDP NUMBER	1-11	12-23	24+
M7X0.75	D4	2	5/16"	82258	\$21.40	\$15.83	\$12.43
M8X1.25	D3	2	5/16"	82282	21.40	15.83	12.43
M8X1.0	D3	2	5/16"	82272	21.40	15.83	12.43
M8X1.0	D5	2	5/16"	82278	21.40	15.83	12.43
M9X1.25	D3	3	3/8"	82302	23.39	17.75	14.07
M9X1.25	D5	3	3/8"	82308	23.39	17.75	14.07
M9X1.0	D3	3	3/8"	82292	23.39	17.75	14.07
M9X1.0	D5	3	3/8"	82298	23.39	17.75	14.07
M10X1.5	D3	3	3/8"	82332	32.06	25.19	20.49
M10X1.5	D5	3	3/8"	82338	32.06	25.19	20.49
M10X1.25	D3	3	3/8"	82322	32.06	25.19	20.49
M10X1.25	D5	3	3/8"	82328	32.06	25.19	20.49
M10X1.0	D3	3	3/8"	82312	32.06	25.19	20.49
M10X1.0	D5	3	3/8"	82318	32.06	25.19	20.49
M11X1.5	D3	3	7/16"	82348	32.06	25.19	20.49
M11X1.5	D5	3	7/16"	82352	32.06	25.19	20.49
M12X1.75	D3	3	1/2"	82378	34.96	28.65	25.93
M12X1.75	D5	3	1/2"	82382	34.96	28.65	25.93
M12X1.5	D3	3	1/2"	82368	34.96	28.65	25.93
M12X1.5	D5	3	1/2"	82372	34.96	28.65	25.93
M12X1.25	D3	3	1/2"	82358	34.96	28.65	25.93
M12X1.25	D5	3	1/2"	82362	34.96	28.65	25.93
M14X2.0	D3	3	9/16"	82412	40.57	35.41	31.96
M14X2.0	D5	3	9/16"	82419	40.57	35.41	31.96
M14X1.5	D3	3	9/16"	82402	40.57	35.41	31.96
M14X1.5	D5	3	9/16"	82408	40.57	35.41	31.96
M14X1.25	D5	3	9/16"	82398	40.57	35.41	31.96
M15X1.5	D3	3	5/8"	82428	47.73	44.45	42.61
M15X1.5	D5	3	5/8"	82432	47.73	44.45	42.61
M16X2.0	D4	3	5/8"	82448	47.73	44.45	42.61
M16X2.0	D6	3	5/8"	82452	47.73	44.45	42.61
M16X1.5	D3	3	5/8"	82438	47.73	44.45	42.61
M16X1.5	D5	3	5/8"	82442	47.73	44.45	42.61

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	LIST PRICE
			SPPT PLUG EDP NUMBER	
M1.6X0.35	D3	2	62800	\$14.66
M1.8X0.35	D2	2	62804	14.66
M2X0.4	D3	2	62808	13.89
M2.2X0.45	D2	2	62812	13.89
M2.5X0.45	D3	2	62814	11.88
M3X0.5	D3	2	62818	9.80
M3.5X0.6	D4	2	62822	8.05
M4X0.7	D4	2	62826	8.05
M4.5X0.75	D4	2	62830	8.05
M5X0.8	D4	2	62834	8.05
M6X1.0	D5	2	62838	8.60
M6.3X1.0	D5	2	62842	8.60
M7X1.0	D5	2	62846	9.60
M8X1.25	D5	2	62850	9.60
M10X1.5	D6	3	62854	17.66
M12X1.75	D6	3	62858	21.96
M14X2.0	D7	3	62862	31.56
M16X2.0	D7	3	62866	39.43
M18X2.5	D7	3	62870	50.51
M20X2.5	D7	3	62874	73.97

## METRIC 52° FAST SPIRAL FLUTED HAND TAPS

LIST 100F  
CLASS 6H FIT

Plug  
Bottom



TAP SIZE	PITCH DIAMETER LIMIT	NO. OF FLUTES	100F		LIST PRICE	
			PLUG EDP NUMBER	BOTTOM EDP NUMBER	1-11	12+
M3X0.5	D3	2	62900	62901	\$16.16	\$14.68
M3.5X0.6	D4	3	62910	62911	12.84	11.67
M4X0.7	D4	3	62920	62921	12.84	11.67
M5X0.8	D4	3	62930	62931	12.84	11.67
M6X1.0	D5	3	62940	62941	13.80	12.56
M8X1.25	D5	3	62950	62951	15.24	13.85
M10X1.5	D6	3	62960	62961	25.31	23.01
M12X1.75	D6	4	62970	62971	33.23	30.21

## 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	LIST PRICE		
				PLUG EDP NUMBER	1-11	12-23	24-71*
M4X0.7	D4	4	.168	45800	\$40.68	\$34.57	\$29.38
M4X0.7	D4	4	.123	45804	40.68	34.57	29.38
M5X0.8	D4	4	.194	45808	40.68	34.57	29.38
M5X0.8	D4	4	.136	45813	40.68	34.57	29.38
M6X1.0	D5	4	.255	45816	43.94	36.35	31.64
M6X1.0	D5	4	.185	45821	43.94	36.35	31.64
M8X1.25	D5	4	.318	45825	46.09	38.15	33.22
M8X1.25	D5	4	.240	45829	46.09	38.15	33.22
M10X1.5	D6	4	.381	45833	54.30	45.66	40.32
M10X1.5	D6	4	.275	45837	54.30	45.66	40.32
M12X1.75	D6	4	.507	45843	57.73	47.43	42.72
M12X1.75	D6	4	.367	45845	57.73	47.43	42.72
M14X2.0	D7	4	.570	45849	63.51	52.17	46.99
M14X2.0	D7	4	.429	45853	63.51	52.17	46.99
M16X2.0	D7	4	.633	45857	67.19	60.10	54.94
M16X2.0	D7	4	.480	45861	67.19	60.10	54.94

## 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	LIST PRICE		
				SPPT PLUG EDP NUMBER	1-11	12-23	24-71*
M4X0.7	D4	2	.168	45900	\$41.82	\$35.54	\$30.22
M4X0.7	D4	2	.123	45904	41.82	35.54	30.22
M5X0.8	D4	2	.194	45908	41.82	35.54	30.22
M5X0.8	D4	2	.136	45912	41.82	35.54	30.22
M6X1.0	D5	2	.255	45916	47.13	39.57	34.88
M6X1.0	D5	2	.185	45921	47.13	39.57	34.88
M8X1.25	D5	2	.318	45925	49.51	41.57	36.63
M8X1.25	D5	2	.240	45928	49.51	41.57	36.63
M10X1.5	D6	3	.381	45933	58.62	49.92	44.63
M10X1.5	D6	3	.275	45937	58.62	49.92	44.63
M12X1.75	D6	3	.507	45941	62.67	52.15	47.47
M12X1.75	D6	3	.367	45945	62.67	52.15	47.47
M14X2.0	D7	3	.570	45949	68.91	57.38	52.23
M14X2.0	D7	3	.429	45953	68.91	57.38	52.23
M16X2.0	D7	3	.633	45957	73.58	66.49	61.34
M16X2.0	D7	3	.480	45961	73.58	66.49	61.34

\*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			LIST PRICE	
			PLUG EDP NUMBER	BOTTOM EDP NUMBER	SPPT PLUG EDP NUMBER	1-11	12+
M3X0.5	3	H-11	65002	65003		\$10.89	\$9.90
M3X0.5	2	H-11			65102	12.20	11.09
M3.5X0.6	3	H-11	65012	65013		9.04	8.21
M3.5X0.6	2	H-11			65112	10.02	9.11
M4X0.7	4	H-11	65022	65023		9.04	8.21
M4X0.7	2	H-11			65122	10.02	9.11
M5X0.8	4	H-11	65032	65033		9.04	8.21
M5X0.8	2	H-11			65132	10.02	9.11
M6X1.0	4	H-11	65042	65043		9.98	9.07
M6X1.0	2	H-11			65142	11.78	10.71
M8X1.25	4	H-11	65052	65053		11.18	10.16
M8X1.25	2	H-11			65152	13.14	11.94
M10X1.5	4	H-11	65062	65063		18.52	16.85
M10X1.5	3	H-11			65162	21.68	19.70
M12X1.75	4	H-11	65072	65073		21.98	20.00
M12X1.75	3	H-11			65172	25.78	23.44

## METRIC PREMIUM STEEL STRAIGHT FLUTE TAPS WITH PENTA RELIEF

LIST 403VM  
CNC DESIGN  
CLASS 6H FIT

Plug  
Bottom  
PENTA



STYLE 1 - M3 THROUGH M5			STYLE 2 - M6 THROUGH M10		STYLE 3 - M12 THROUGH M16	
TAP SIZE	PITCH DIAMETER LIMIT	NO. OF FLUTES	403VM		LIST PRICE	
			PLUG EDP NUMBER	BOTTOM EDP NUMBER		
M3X0.5	D3	3	86002	86003	\$12.10	
M3.5X0.6	D4	3	86012	86013	9.28	
M4X0.7	D4	3	86022	86023	9.63	
M5X0.8	D4	3	86032	86033	9.85	
M6X1.0	D5	3	86042	86043	10.12	
M8X1.25	D5	3	86052	86053	11.72	
M10X1.5	D6	3	86062	86063	21.18	
M12X1.75	D6	3	86072	86073	26.54	
M14X2.0	D7	3	86082	86083	36.83	
M16X2.0	D7	3	86092	86093	46.95	

## 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		LIST PRICE
			SPPT PLUG EDP NUMBER		
M3X0.5	D3	2	86202		\$13.30
M3.5X0.6	D4	3	86212		10.87
M4X0.7	D4	3	86222		11.26
M5X0.8	D4	3	86232		11.60
M6X1.0	D5	3	86242		11.80
M8X1.25	D5	3	86252		14.23
M10X1.5	D6	3	86262		25.91
M12X1.75	D6	3	86272		29.69
M14X2.0	D7	3	86282		40.47
M16X2.0	D7	3	86292		50.56

## 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		LIST PRICE
			PLUG EDP NUMBER	BOTTOM EDP NUMBER	
M3X0.5	D3	2	86402	86403	\$21.49
M3.5X0.6	D4	3	86412	86413	17.12
M4X0.7	D4	3	86422	86423	17.12
M5X0.8	D4	3	86432	86433	17.12
M6X1.0	D5	3	86442	86443	18.81
M8X1.25	D5	3	86452	86453	20.69
M10X1.5	D6	3	86462	86463	38.56
M12X1.75	D6	3	86472	86473	45.98
M14X2.0	D7	3	86482	86483	51.93
M16X2.0	D7	3	86492	86493	65.65

**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 402VMR  
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	LIST PRICE	SPPT PLUG EDP NUMBER	LIST PRICE
M3X0.5	D3	2	86203	\$17.29	86205	\$18.39
M3.5X0.6	D4	3	86213	14.11	86215	14.99
M4X0.7	D4	3	86223	14.63	86225	15.51
M5X0.8	D4	3	86233	15.08	86235	15.98
M6X1.0	D5	3	86243	15.34	86245	16.35
M8X1.25	D5	3	86253	18.50	86255	19.64
M10X1.5	D6	3	86263	33.67	86265	34.98
M12X1.75	D6	3	86273	38.59	86275	40.77
M14X2.0	D7	3	86283	52.62	86285	55.23
M16X2.0	D7	3	86293	65.73	86295	69.01

**HIGH VANADIUM  
PENTA  
BLUE**

## METRIC PREMIUM STEEL SLOW SPIRAL FLUTED TAPS WITH PENTA RELIEF

**LIST 407VMR  
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		LIST PRICE	PENTA BLUE		
			MOD. BOTT EDP NUMBER	BOTTOM EDP NUMBER		MOD. BOTT EDP NUMBER	BOTTOM EDP NUMBER	
M3X0.5	D3	2	86602	86603	\$27.94	86604	86605	\$29.04
M3.5X0.6	D4	3	86612	86613	22.27	86614	86615	23.15
M4X0.7	D4	3	86622	86623	22.27	86624	86625	23.15
M5X0.8	D4	3	86632	86633	22.27	86634	86635	23.17
M6X1.0	D5	3	86642	86643	24.46	86644	86645	25.47
M8X1.25	D5	3	86652	86653	26.91	86654	86655	28.05
M10X1.5	D6	3	86662	86663	50.13	86664	86665	51.44
M12X1.75	D6	3	86672	86673	59.77	86674	86675	61.95
M14X2.0	D7	3	86682	86683	67.50	86684	86685	70.11
M16X2.0	D7	3	86692	86693	85.33	86694	86695	88.61

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		LIST PRICE
				PLUG EDP NUMBER	BOTTOM EDP NUMBER	
4 - 40	NC	H-2	3	84402	84403	\$ 9.93
5 - 40	NC	H-2	3	84405	84406	9.93
6 - 32	NC	H-3	3	84412	84413	7.62
8 - 32	NC	H-3	3	84422	84423	7.89
10 - 24	NC	H-3	3	84432	84433	8.07
10 - 32	NF	H-3	3	84442	84443	8.07
1/4 - 20	NC	H-3	3	84452	84453	8.29
1/4 - 20	NC	H-5	3	84462	84463	8.29
1/4 - 28	NF	H-3	3	84472	84473	8.29
5/16 - 18	NC	H-3	3	84482	84483	9.60
5/16 - 18	NC	H-5	3	84492	84493	9.60
5/16 - 24	NF	H-3	3	84502	84503	9.60
3/8 - 16	NC	H-3	3	84512	84513	11.00
3/8 - 16	NC	H-5	3	84522	84523	11.00
3/8 - 24	NF	H-3	3	84532	84533	11.00
7/16 - 14	NC	H-3	3	84542	84543	17.36
7/16 - 14	NC	H-5	3	84552	84553	17.36
7/16 - 20	NF	H-3	3	84562	84563	17.36
1/2 - 13	NC	H-3	3	84572	84573	21.75
1/2 - 13	NC	H-5	3	84582	84583	21.75
1/2 - 20	NF	H-3	3	84592	84593	21.75
9/16 - 12	NC	H-3	3	84602	84603	30.19
9/16 - 12	NC	H-5	3	84612	84613	30.19
9/16 - 18	NF	H-3	3	84622	84623	30.19
5/8 - 11	NC	H-3	3	84632	84633	38.46
5/8 - 11	NC	H-5	3	84642	84643	38.46
5/8 - 18	NF	H-3	3	84652	84653	38.46
3/4 - 10	NC	H-3	3	84662	84663	54.18
3/4 - 10	NC	H-5	3	84672	84673	54.18
3/4 - 16	NF	H-3	3	84682	84683	54.18

**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	LIST PRICE
				SPPT PLUG EDP NUMBER	
4 - 40	NC	H-2	2	84800	\$ 10.90
5 - 40	NC	H-2	2	84799	10.90
6 - 32	NC	H-3	3	84801	8.90
8 - 32	NC	H-3	3	84803	9.22
10 - 24	NC	H-3	3	84805	9.50
10 - 32	NF	H-3	3	84807	9.50
1/4 - 20	NC	H-3	3	84809	9.68
1/4 - 20	NC	H-5	3	84812	9.68
1/4 - 28	NF	H-3	3	84814	9.68
5/16 - 18	NC	H-3	3	84816	11.65
5/16 - 18	NC	H-5	3	84818	11.65
5/16 - 24	NF	H-3	3	84821	11.65
3/8 - 16	NC	H-3	3	84823	13.58
3/8 - 16	NC	H-5	3	84825	13.58
3/8 - 24	NF	H-3	3	84827	13.58
7/16 - 14	NC	H-3	3	84829	21.23
7/16 - 14	NC	H-5	3	84832	21.23
7/16 - 20	NF	H-3	3	84834	21.23
1/2 - 13	NC	H-3	3	84836	24.33
1/2 - 13	NC	H-5	3	84838	24.33
1/2 - 20	NF	H-3	3	84841	24.33
9/16 - 12	NC	H-3	3	84843	33.19
9/16 - 12	NC	H-5	3	84845	33.19
9/16 - 18	NF	H-3	3	84847	33.19
5/8 - 11	NC	H-3	3	84849	41.44
5/8 - 11	NC	H-5	3	84852	41.44
5/8 - 18	NF	H-3	3	84854	41.44
3/4 - 10	NC	H-3	3	84856	57.38
3/4 - 10	NC	H-5	3	84858	57.38
3/4 - 16	NF	H-3	3	84861	57.38

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		LIST PRICE
				PLUG EDP NUMBER	BOTTOM EDP NUMBER	
4 - 40	NC	H-2	2	84992	84993	\$17.63
5 - 40	NC	H-2	2	84998	84999	17.63
6 - 32	NC	H-3	3	85001	85002	14.03
8 - 32	NC	H-3	3	85003	85004	14.03
10 - 24	NC	H-3	3	85005	85006	14.03
10 - 32	NF	H-3	3	85007	85008	14.03
1/4 - 20	NC	H-3	3	85009	85011	15.42
1/4 - 20	NC	H-5	3	85012	85013	15.42
1/4 - 28	NF	H-3	3	85014	85015	15.42
5/16 - 18	NC	H-3	3	85016	85017	16.95
5/16 - 18	NC	H-5	3	85018	85019	16.95
5/16 - 24	NF	H-3	3	85021	85022	16.95
3/8 - 16	NC	H-3	3	85023	85024	19.84
3/8 - 16	NC	H-5	3	85025	85026	19.84
3/8 - 24	NF	H-3	3	85027	85028	19.84
7/16 - 14	NC	H-3	3	85029	85031	31.61
7/16 - 14	NC	H-5	3	85032	85033	31.61
7/16 - 20	NF	H-3	3	85034	85035	31.61
1/2 - 13	NC	H-3	3	85036	85037	37.69
1/2 - 13	NC	H-5	3	85038	85039	37.69
1/2 - 20	NF	H-3	3	85041	85042	37.69
9/16 - 12	NC	H-3	3	85043	85044	42.56
9/16 - 12	NC	H-5	3	85045	85046	42.56
9/16 - 18	NF	H-3	3	85047	85048	42.56
5/8 - 11	NC	H-3	3	85049	85051	53.80
5/8 - 11	NC	H-5	3	85052	85053	53.80
5/8 - 18	NF	H-3	3	85054	85055	53.80
3/4 - 10	NC	H-3	3	85056	85057	75.72
3/4 - 10	NC	H-5	3	85058	85059	75.72
3/4 - 16	NF	H-3	3	85061	85062	75.72

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	LIST PRICE	PENTA BLUE	LIST PRICE
				SPPT PLUG EDP NUMBER		SPPT PLUG EDP NUMBER	
4 - 40	NC	H-2	2	86902	\$14.17	86903	\$15.27
5 - 40	NC	H-2	2	86906	14.17	86907	15.27
6 - 32	NC	H-3	3	86910	11.58	86911	12.46
8 - 32	NC	H-3	3	86914	12.00	86915	12.88
10 - 24	NC	H-3	3	86918	12.37	86919	13.27
10 - 32	NF	H-3	3	86920	12.37	86921	13.27
1/4 - 20	NC	H-3	3	86922	12.58	86923	13.59
1/4 - 20	NC	H-5	3	86924	12.58	86925	13.59
1/4 - 28	NF	H-3	3	86926	12.58	86927	13.59
5/16 - 18	NC	H-3	3	86928	15.15	86929	16.29
5/16 - 18	NC	H-5	3	86930	15.15	86931	16.29
5/16 - 24	NF	H-3	3	86932	15.15	86933	16.29
3/8 - 16	NC	H-3	3	86934	16.66	86935	17.97
3/8 - 16	NC	H-5	3	86936	16.66	86937	17.97
3/8 - 24	NF	H-3	3	86938	16.66	86939	17.97
7/16 - 14	NC	H-3	3	86940	17.64	86941	19.46
7/16 - 14	NC	H-5	3	86942	17.64	86943	19.46
7/16 - 20	NF	H-3	3	86944	17.64	86945	19.46
1/2 - 13	NC	H-3	3	86946	31.63	86947	33.81
1/2 - 13	NC	H-5	3	86948	31.63	86949	33.81
1/2 - 20	NF	H-3	3	86950	31.63	86951	33.81
9/16 - 12	NC	H-3	3	86952	43.14	86953	45.75
9/16 - 12	NC	H-5	3	86954	43.14	86955	45.75
9/16 - 18	NF	H-3	3	86956	43.14	86957	45.75
5/8 - 11	NC	H-3	3	86958	53.88	86959	57.16
5/8 - 11	NC	H-5	3	86960	53.88	86961	57.16
5/8 - 18	NF	H-3	3	86962	53.88	86963	57.16
3/4 - 10	NC	H-3	3	86964	74.59	86965	79.19
3/4 - 10	NC	H-5	3	86966	74.59	86967	79.19
3/4 - 16	NF	H-3	3	86968	74.59	86969	79.19

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, 402VMPP, 403V, 403VM, 407VPR and 407VMPP.

**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		LIST PRICE	PENTA BLUE		LIST PRICE
				MOD. BOTT EDP NUMBER	BOTTOM EDP NUMBER		MOD. BOTT EDP NUMBER	BOTTOM EDP NUMBER	
4 - 40	NC	H-2	2	86702	86703	\$22.90	86704	86705	\$24.00
5 - 40	NC	H-2	2	86706	86707	22.90	86708	86709	24.00
6 - 32	NC	H-3	3	86710	86711	18.25	86712	86713	19.13
8 - 32	NC	H-3	3	86714	86715	18.25	86716	86717	19.13
10 - 24	NC	H-3	3	86718	86719	18.25	86720	86721	19.15
10 - 32	NF	H-3	3	86722	86723	18.25	86724	86725	19.15
1/4 - 20	NC	H-3	3	86734	86735	20.04	86736	86737	21.05
1/4 - 20	NC	H-5	3	86738	86739	20.04	86740	86741	21.05
1/4 - 28	NF	H-3	3	86742	86743	20.04	86744	86745	21.05
5/16 - 18	NC	H-3	3	86746	86747	22.05	86748	86749	23.19
5/16 - 18	NC	H-5	3	86750	86751	22.05	86752	86753	23.19
5/16 - 24	NF	H-3	3	86754	86755	22.05	86756	86757	23.19
3/8 - 16	NC	H-3	3	86758	86759	25.80	86760	86761	27.11
3/8 - 16	NC	H-5	3	86762	86763	25.80	86764	86765	27.11
3/8 - 24	NF	H-3	3	86766	86767	25.80	86768	86769	27.11
7/16 - 14	NC	H-3	3	86770	86771	41.09	86772	86773	42.91
7/16 - 14	NC	H-5	3	86774	86775	41.09	86776	86777	42.91
7/16 - 20	NF	H-3	3	86778	86779	41.09	86780	86781	42.91
1/2 - 13	NC	H-3	3	86782	86783	49.00	86784	86785	51.18
1/2 - 13	NC	H-5	3	86786	86787	49.00	86788	86789	51.18
1/2 - 20	NF	H-3	3	86790	86791	49.00	86792	86793	51.18
9/16 - 12	NC	H-3	3	86794	86795	55.31	86796	86797	57.92
9/16 - 12	NC	H-5	3	86798	86799	55.31	86802	86803	57.92
9/16 - 18	NF	H-3	3	86804	86805	55.31	86806	86807	57.92
5/8 - 11	NC	H-3	3	86808	86809	69.95	86810	86811	73.23
5/8 - 11	NC	H-5	3	86812	86813	69.95	86814	86815	73.23
5/8 - 18	NF	H-3	3	86816	86817	69.95	86818	86819	73.23
3/4 - 10	NC	H-3	3	86820	86821	98.44	86822	86823	103.04
3/4 - 10	NC	H-5	3	86824	86825	98.44	86826	86827	103.04
3/4 - 16	NF	H-3	3	86828	86829	98.44	86830	86831	103.04

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.

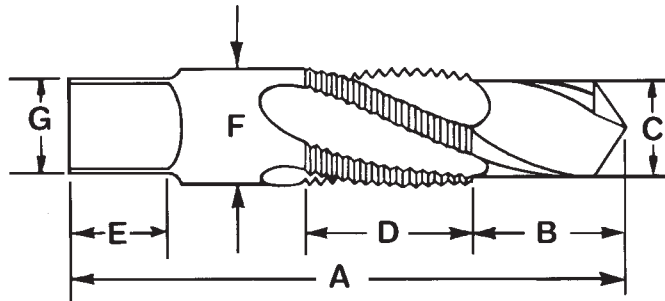
## H.S.S. COMBINED PIPE TAPS AND DRILLS

LIST 18

NPT  
NPTF



TAP SIZE	18		LIST PRICE			
	NPT EDP NUMBER	NPTF EDP NUMBER	1-5	6-11	12-47	48+
1/16 - 27	63010	63012	\$130.55	\$87.10	\$66.66	\$55.55
1/8 - 27	63020	63022	144.47	94.29	77.85	66.66
1/4 - 18	63030	63032	166.85	107.37	90.72	81.45
3/8 - 18	63040	63042	177.67	121.95	107.37	94.29
1/2 - 14	63050	63052	229.88	187.13	163.16	139.22
3/4 - 14	63060	63062	333.65	271.53	240.27	220.74
1 - 11 1/2	63070	63072	476.85	403.33	352.83	337.44



## 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

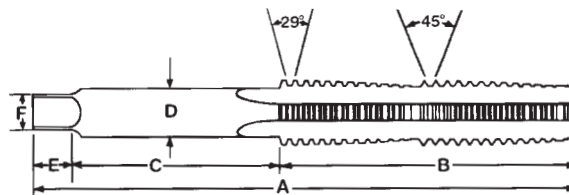
**LIST 29**  
**RIGHT HAND**

**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	LIST PRICE				
		NA2G EDP NUMBER	1-2	3-5	6-8	9-11	12+
1/2 - 10	4	63110	\$231.20	\$201.04	\$179.90	\$163.05	\$146.74
5/8 - 8	4	63120	271.32	246.93	220.05	202.91	182.62
3/4 - 6	4	63130	351.35	321.79	297.89	283.72	255.34
7/8 - 6	4	63140	361.26	331.64	307.53	293.20	263.88
1 - 5	4	63150	432.57	382.13	351.01	336.80	303.11
1 1/8 - 5	4	63160	465.14	414.70	382.43	368.47	331.62
1 1/4 - 5	4	63170	501.33	448.84	415.33	400.45	360.39
1 3/8 - 4	4	63180	562.27	509.73	476.48	461.62	415.46
1 1/2 - 4	4	63190	614.77	554.81	521.76	506.52	455.88



## 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			LIST PRICE	
				LEFT HAND TAPER EDP NUMBER	LEFT HAND PLUG EDP NUMBER	LEFT HAND BOTTOM EDP NUMBER	1-11	12+
6 - 32	NC	3	H-3	80001	80002	80003	\$8.60	\$7.83
6 - 40	NF	3	H-2	80007	80008	80009	8.60	7.83
8 - 32	NC	4	H-3	80011	80012	80013	8.60	7.83
8 - 36	NF	4	H-2	80017	80018	80019	8.60	7.83
10 - 24	NC	4	H-3	80021	80022	80023	8.60	7.83
10 - 32	NF	4	H-3	80027	80028	80029	8.60	7.83
1/4 - 20	NC	4	H-3	80031	80032	80033	9.89	8.99
1/4 - 28	NF	4	H-3	80037	80038	80039	9.89	8.99
5/16 - 18	NC	4	H-3	80041	80042	80043	10.98	9.98
5/16 - 24	NF	4	H-3	80047	80048	80049	10.98	9.98
3/8 - 16	NC	4	H-3	80051	80052	80053	14.29	13.00
3/8 - 24	NF	4	H-3	80057	80058	80059	14.29	13.00
7/16 - 14	NC	4	H-3	80061	80062	80063	21.68	19.70
7/16 - 20	NF	4	H-3	80067	80068	80069	21.68	19.70
1/2 - 13	NC	4	H-3	80071	80072	80073	24.28	22.07
1/2 - 20	NF	4	H-3	80077	80078	80079	24.28	22.07
9/16 - 12	NC	4	H-3	80081	80082	80083	35.97	32.70
9/16 - 18	NF	4	H-3	80087	80088	80089	35.97	32.70
5/8 - 11	NC	4	H-3	80091	80092	80093	45.46	41.33
5/8 - 18	NF	4	H-3	80097	80098	80099	45.46	41.33
11/16 - 11	NS	4	H-3	80101	80102	80103	53.12	48.29
11/16 - 16	NS	4	H-3	80107	80108	80109	53.12	48.29
3/4 - 10	NC	4	H-3	80111	80112	80113	56.24	51.14
3/4 - 16	NF	4	H-3	80117	80118	80119	56.24	51.14
7/8 - 9	NC	4	H-4	80121	80122	80123	76.50	69.54
7/8 - 14	NF	4	H-4	80127	80128	80129	76.50	69.54
1 - 8	NC	4	H-4	80131	80132	80133	100.20	91.10
1 - 12	NF	4	H-4	80137	80138	80139	100.20	91.10
1 - 14	NS	4	H-4	80141	80142	80143	100.20	91.10
1 1/8 - 7	NC	4	H-4	80147	80148	80149	134.99	122.72
1 1/8 - 12	NF	4	H-4	80151	80152	80153	134.99	122.72
1 1/4 - 7	NC	4	H-4	80157	80158	80159	158.82	144.38
1 1/4 - 12	NF	6	H-4	80161	80162	80163	158.82	144.38
1 3/8 - 6	NC	4	H-4	80167	80168	80169	205.10	186.45
1 3/8 - 12	NF	6	H-4	80171	80172	80173	205.10	186.45
1 1/2 - 6	NC	4	H-4	80177	80178	80179	264.58	240.52
1 1/2 - 12	NF	6	H-4	80181	80182	80183	264.58	240.52

**NOTE:** Sets of L.H. taps also furnished at 3 x 12 pc. price.

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			LIST PRICE	
			TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	1-11	12+
12 - 32	H-3	4	83001	83002	83003	\$11.95	\$10.87
1/4 - 32	H-3	4	83007	83008	83009	12.88	11.71
1/4 - 32	H-5	4	84007	84008	84009	19.04	17.32
5/16 - 32	H-3	4	83011	83012	83013	14.20	12.91
5/16 - 32	H-5	4	84011	84012	84013	20.21	18.36
3/8 - 32	H-3	4	83017	83018	83019	16.35	14.87
3/8 - 32	H-5	4	84017	84018	84019	22.75	20.68
7/16 - 28	H-3	4	83021	83022	83023	21.93	19.93
7/16 - 28	H-5	4	84021	84022	84023	28.60	25.99
1/2 - 28	H-3	4	83027	83028	83029	25.93	23.56
1/2 - 28	H-5	4	84027	84028	84029	32.63	29.65
9/16 - 24	H-3	4	83031	83032	83033	30.30	27.55
9/16 - 24	H-5	4	84031	84032	84033	37.31	33.92
5/8 - 24	H-3	6	83037	83038	83039	37.70	34.27
5/8 - 24	H-5	6	84037	84038	84039	45.32	41.20
11/16 - 24	H-3	6	83041	83042	83043	44.32	40.30
11/16 - 24	H-5	6	84041	84042	84043	51.79	47.10
3/4 - 20	H-3	6	83047	83048	83049	52.14	47.40
3/4 - 20	H-5	6	84047	84048	84049	59.80	54.36
13/16 - 20	H-3	6	83051	83052	83053	62.78	57.07
13/16 - 20	H-5	6	84051	84052	84053	70.25	63.87
7/8 - 20	H-3	6	83057	83058	83059	71.99	65.45
7/8 - 20	H-5	6	84057	84058	84059	78.98	71.80
15/16 - 20	H-3	6	83061	83062	83063	75.66	68.79
15/16 - 20	H-5	6	84061	84062	84063	83.02	75.47
1 - 20	H-3	6	83067	83068	83069	92.73	84.29
1 - 20	H-5	6	84067	84068	84069	102.26	92.97
1 1/16 - 18	H-4	6	83071	83072	83073	124.40	113.09
1 1/16 - 18	H-3	6	84071	84072	84073	135.79	123.44
1 1/16 - 18	H-6	6	84271	84272	84273	135.79	123.44
1 1/8 - 18	H-4	6	83077	83078	83079	124.40	113.09
1 1/8 - 18	H-3	6	84077	84078	84079	135.79	123.44
1 1/8 - 18	H-6	6	84277	84278	84279	135.79	123.44
1 3/16 - 18	H-4	6	83081	83082	83083	141.44	128.58
1 3/16 - 18	H-3	6	84081	84082	84083	170.71	155.19
1 3/16 - 18	H-6	6	84281	84282	84283	170.71	155.19
1 1/4 - 18	H-4	6	83087	83088	83089	141.44	128.58
1 1/4 - 18	H-3	6	84087	84088	84089	170.71	155.19
1 1/4 - 18	H-6	6	84287	84288	84289	170.71	155.19
1 5/16 - 18	H-4	6	83091	83092	83093	173.42	157.65
1 5/16 - 18	H-3	6	84091	84092	84093	201.39	183.08

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			LIST PRICE	
			TAPER EDP NUMBER	PLUG EDP NUMBER	BOTTOM EDP NUMBER	1-11	12+
1 5/16 - 18	H-6	6	84291	84292	84293	\$201.39	\$183.08
1 3/8 - 18	H-4	6	83097	83098	83099	173.42	157.65
1 3/8 - 18	H-3	6	84097	84098	84099	201.39	183.08
1 3/8 - 18	H-6	6	84297	84298	84299	201.39	183.08
1 7/16 - 18	H-4	6	83101	83102	83103	181.52	165.02
1 7/16 - 18	H-3	6	84101	84102	84103	248.99	226.36
1 7/16 - 18	H-6	6	84301	84302	84303	248.99	226.36
1 1/2 - 18	H-4	6	83107	83108	83109	181.52	165.02
1 1/2 - 18	H-3	6	84107	84108	84109	248.99	226.36
1 1/2 - 18	H-6	6	84307	84308	84309	248.99	226.36

## H.S.S. SEMI-SPECIAL RIGHT HAND TAPS TAPER, PLUG & BOTTOM

TAP SIZE	NO. OF FLUTES	AVAILABLE THREADS PER INCH + H LIMITS										LIST PRICE			
		24	H-3	27	H-3	36	H-2	40	H-2	48	H-2	1	2-5	6-11	12-47*
1/4	4	24	H-3	27	H-3	36	H-2	40	H-2	48	H-2	\$135.06	\$68.04	\$43.25	\$28.40
5/16	4	20	H-3	27	H-3	40	H-2					137.09	69.81	44.42	29.82
3/8	4	18	H-3	20	H-3	27	H-3	40	H-2			147.42	75.98	48.77	32.15
7/16	4	16	H-3	24	H-3	27	H-3	32	H-3	40	H-2	162.48	85.52	57.46	39.70
1/2	4	12	H-3	16	H-3	24	H-3					166.82	89.48	64.49	44.59
1/2	6	32	H-3	40	H-2							166.82	89.48	64.49	44.59
9/16	4	16	H-3	20	H-3							176.25	99.61	70.03	50.17
9/16	6	27	H-3	32	H-3							176.25	99.61	70.03	50.17
5/8	4	12	H-3	16	H-3	20	H-3					188.21	110.28	80.90	60.85
5/8	6	27	H-3	32	H-3							188.21	110.28	80.90	60.85
11/16	6	18	H-3	20	H-3	32	H-3					199.14	123.44	89.48	68.39
3/4	4	12	H-4	18	H-3							213.81	136.28	99.34	78.79
3/4	6	24	H-3	27	H-3	32	H-3					213.81	136.28	99.34	78.79
13/16	4	16	H-3	18	H-3							230.87	148.50	108.77	87.38
13/16	6	24	H-3									230.87	148.50	108.77	87.38
7/8	4	12	H-4	16	H-3							248.07	164.96	124.36	102.38
7/8	6	18	H-3									248.07	164.96	124.36	102.38
15/16	6	12	H-4	16	H-3	18	H-3					257.57	172.62	131.70	106.02
1"	6	16	H-3	18	H-3	24	H-3	27	H-3	32	H-3	282.26	200.13	154.32	125.50

**NOTE:** Prices apply to the above sizes, pitches, GH numbers, and numbers of flutes only.

\*For larger quantities, consult factory.

See page 89 for Tap Dimensions.

## 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	LIST PRICE	EDP NUMBER
FOR BOLTS	No. 1	11, 12, 13, 14, 16, 18, 20 and 24	\$16.50	63400
	No. 2	9, 10, 12, 16, 20, 27, 28 and 32	16.50	63410
	No. 1 & No. 2 Set	63400 & 63410	33.00	63405
FOR PIPE (EXTERNAL)	No. 3	8 and 10	25.47	63420
	No. 4	8 and 11 1/2	25.47	63430
	No. 5	10 and 14	25.47	63440
FOR PIPE (INTERNAL)	No. 6	8 and 10	16.50	63450
	No. 7	8 and 11 1/2	16.50	63460
	No. 8	10 and 14	16.50	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	16.50	63480

### NU-TRIX

- #1
- #2
- #9



### NU-TRIX

- #3
- #4
- #5



### NU-TRIX

- #6
- #7
- #8



**NOTE:** Metric Nu-Trix No. 9 - When the current stock is depleted the 0.75 Pitch will be replaced with 0.8 Pitch.



## 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	\$240.13	\$174.11	\$127.24	\$97.72	\$78.71	\$70.57	\$63.06	\$58.24	\$55.86	\$52.87	\$49.62	\$48.16	\$46.89	\$46.43	\$45.24	\$4.57	
00-90	236.58	170.88	123.87	94.61	75.53	67.43	59.87	55.29	52.60	49.62	47.43	45.24	44.59	44.55	44.42	4.57	
0	209.87	145.50	99.24	66.35	50.53	42.72	36.35	31.64	28.80	25.77	23.74	22.52	21.27	20.13	14.20	3.09	
1	209.07	143.79	97.19	66.88	49.05	40.77	34.82	30.14	26.88	24.22	22.17	20.64	19.39	18.60	13.09	2.85	
2	206.99	142.62	96.03	65.49	47.95	39.51	33.65	28.51	25.77	22.89	21.01	19.39	18.26	17.36	12.22	2.54	\$7.86
3	197.50	133.81	88.53	58.09	42.72	33.93	28.51	24.43	21.82	18.95	17.05	15.53	14.70	13.06	9.38	2.02	6.10
4	189.66	126.40	82.17	52.28	38.36	30.49	24.43	21.27	17.91	15.42	14.70	13.06	12.31	11.09	7.83	1.66	4.95
5	189.66	126.40	82.17	52.28	38.36	30.49	24.43	21.27	17.91	15.42	14.70	13.06	12.31	11.09	7.83	1.66	4.95
6	187.13	123.97	79.84	50.25	36.35	28.51	22.17	18.95	15.79	13.82	12.31	11.09	9.93	9.19	5.96	1.26	4.03
7	187.13	123.97	79.84	50.25	36.35	28.51	22.17	18.95	15.79	13.82	12.31	11.09	9.93	9.19	8.17	1.26	
8	187.13	123.97	79.84	50.25	36.35	28.51	22.17	18.95	15.79	13.82	12.31	11.09	9.93	9.19	6.25	1.26	4.03
9	187.52	124.41	79.84	50.25	36.35	28.51	22.52	18.95	15.79	13.82	12.65	11.09	10.22	9.19	8.49	1.42	
10	187.52	124.41	79.84	50.25	36.35	28.51	22.52	18.95	15.79	13.82	12.65	11.09	10.22	9.19	6.24	1.42	4.10
12	193.05	129.30	83.82	53.76	38.36	29.65	24.22	20.13	17.36	14.70	12.65	11.09	10.22	9.19	6.40	1.42	4.10
14	194.40	131.38	85.73	55.80	39.93	31.64	25.77	22.17	19.39	16.63	14.70	13.06	12.31	11.09	7.83	1.63	4.95

*Prices on chart apply when taps are moderately oversize, but may or 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	\$32.36	\$33.96	\$35.59	\$37.33
2	16.87	17.64	18.43	19.34
3-5	11.64	12.19	12.81	13.37
6-8	6.40	6.70	7.06	7.39
9-11	5.24	5.41	5.68	5.92
12-23	3.85	4.06	4.24	4.35
24-47	2.60	2.68	2.70	4.35
48-71	1.70	1.89	1.90	4.35
72-95	1.20	1.20	1.20	4.35
96-143	.87	.87	.87	4.35
144+	.39	.39	.87	4.35



## 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	\$194.20	\$130.55	\$85.45	\$54.94	\$39.51	\$30.86	\$25.35	\$21.27	\$18.60	\$15.79	\$13.82	\$1.53	\$3.64	\$4.10
5/16	195.42	131.92	86.61	56.08	40.77	32.05	26.51	22.52	19.79	17.05	15.04	1.66	4.09	4.57
3/8	202.48	138.12	94.03	61.71	43.44	35.61	29.37	24.43	21.82	18.60	17.05	2.02	4.78	5.31
7/16	216.41	149.09	100.84	71.30	50.17	41.72	35.17	30.15	27.24	24.43	22.25	2.68	6.41	7.41
1/2	222.46	153.28	105.33	74.73	54.94	46.28	38.50	33.50	31.00	27.69	25.56	3.25	7.60	8.90
9/16	226.78	157.93	109.52	78.99	59.20	50.86	42.97	38.01	35.20	32.25	30.15	3.87	7.90	10.36
5/8	235.82	165.42	117.33	87.61	67.81	58.60	50.86	45.88	42.13	38.83	36.87	5.03	9.84	11.41
11/16	244.08	172.69	123.97	95.80	74.73	64.69	56.58	51.52	47.95	44.73	42.65	5.68	11.72	13.70
3/4	253.55	181.42	134.27	106.40	83.47	71.89	64.51	59.20	55.34	52.54	50.37	6.89	13.93	16.28
13/16	263.03	191.67	143.76	114.85	93.41	81.76	73.97	69.03	65.23	62.05	59.97	8.35	16.88	19.70
7/8	278.58	201.79	154.46	126.36	102.45	90.07	82.30	77.26	73.52	70.22	68.33	9.68	19.29	22.50
15/16	282.38	205.60	158.24	130.06	106.19	93.83	85.96	81.03	77.26	73.97	71.89	10.15	20.46	23.84
1	307.96	226.78	177.71	150.79	127.16	111.55	103.71	98.88	95.06	91.64	85.54	13.03	25.67	29.97
1 1/16, 1 1/8	346.26	260.80	210.80	181.43	157.87	142.03	134.27	129.34	125.18	122.35	111.55	17.46	34.88	
1 3/16, 1 1/4	389.19	297.97	245.38	217.25	196.31	179.69	166.89	144.85				22.40	44.78	
1 5/16	413.35	321.34	263.98	236.34	214.75	198.34	167.75					25.32	50.37	
1 3/8	433.17	340.74	282.50	254.96	233.45	217.25	186.45					27.96	56.10	
1 7/16, 1 1/2	514.30	436.60	359.31	320.43	295.10	273.02	240.52					36.10	72.20	
1 5/8	567.91	490.29	410.64	371.95	346.75	324.26	291.97					41.68	83.40	
1 3/4	597.74	520.09	439.22	400.31	375.31	352.83	320.43					45.80		
1 7/8	687.96	608.47	506.09	468.19	439.61	420.66	382.61					54.78		
2	717.85	638.27	534.64	496.67	468.19	449.07	411.16					58.70	117.42	
2 1/8	772.53	693.05	586.92	548.92	520.41	501.49	463.30							
2 1/4	958.49	862.82	730.16	663.66	625.74	606.84	568.80					81.29		
2 3/8	1007.20	907.90	773.46	706.90	668.93	650.01	611.95							
2 1/2	1071.80	972.46	835.21	768.71	730.61	711.62	673.57					96.26		
2 5/8	1148.11	1048.21	908.20	844.53	803.68	784.62	746.76					106.61		
2 3/4	1414.31	1245.98	1029.90	953.88	910.32	896.95	858.87							
2 7/8	1475.32	1306.45	1088.20	1012.16	974.26	955.15	917.22					130.96		
3	1562.00	1393.09	1171.08	1095.16	1057.10	1038.10	1000.07							
3 1/8	1613.76	1501.48	1274.72	1198.82	1160.73	1141.64	1103.76							
3 1/4	1757.55	1588.97	1358.10	1282.23	1244.11	1225.09	1187.09							
3 3/8	1850.92	1682.55	1447.91	1371.94	1333.90	1314.92	1276.89							
3 1/2	2215.64	2004.11	1748.55	1596.41	1539.42	1482.52								
3 5/8	2325.40	2106.95	1853.90	1701.85	1644.78	1587.91								
3 3/4	2439.57	2233.60	1963.03	1811.08	1754.07	1697.15								
3 7/8	2562.45	2343.88	2080.50	1928.51	1871.47	1814.49								
4	2690.57	2472.13	2205.64	2051.19	1994.14	1937.10								

**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 or more 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. 1 1/16" to 1 1/2" 4, 6 Fl. - 1 9/16" & larger 6, 8 Fl.*

TAP SIZE	LIST PRICE								
	1	2	3-5	6-8	9-11	12-23	24-47	48-71	72-95
1 1/16	\$312.65	\$231.51	\$182.20	\$155.32	\$132.19	\$116.22	\$108.76	\$103.29	\$99.63
1 1/8									
1 3/16	348.87	263.01	213.20	183.40	159.88	144.17	136.76	131.31	108.79
1 1/4									
1 5/16	376.55	285.49	233.45	205.73	184.18	168.15	155.32	137.11	
1 3/8									
1 7/16	406.74	314.81	257.63	230.05	208.68	192.19	161.59		
1 1/2									
1 5/8	486.21	389.71	327.36	298.45	275.93	259.02	226.78		
1 3/4	526.01	448.75	370.52	331.68	306.53	284.07	251.75		
1 7/8	552.57	474.89	396.05	357.15	332.21	309.65	277.21		
2	579.68	502.52	421.96	275.62	358.01	335.60	303.16		
2 1/8	689.39	609.97	507.41	469.47	441.01	421.96	383.86		
2 1/4	743.02	664.12	559.28	521.03	492.83	473.72	435.75		
2 3/8	787.01	707.47	600.71	562.82	534.22	515.19	477.30		
2 1/2	920.14	820.77	690.03	623.61	585.55	562.98	528.61		
2 5/8	968.74	869.49	736.70	670.25	632.16	613.22	575.18		
2 3/4	1015.68	916.50	781.63	715.17	677.10	658.19	620.11		
2 7/8	1063.56	964.41	827.42	760.90	722.79	703.86	665.90		
3	1123.25	1023.83	884.33	817.86	779.82	760.90	722.79		
3 1/8	1191.52	1092.22	949.60	883.07	845.04	826.17	788.16		
3 1/4	1403.50	1234.80	1019.57	943.56	905.12	886.58	848.51		
3 3/8	1470.88	1301.98	1083.87	1007.90	969.84	950.96	912.95		
3 1/2	1540.73	1372.11	1150.84	1074.76	1036.78	1017.86	979.76		
3 5/8	1614.68	1444.63	1220.30	1144.31	1106.61	1087.30	1049.57		
3 3/4	1690.96	1522.30	1294.61	1218.58	1180.65	1161.75	1123.64		
3 7/8	1773.73	1604.93	1373.76	1297.97	1259.62	1240.57	1202.72		
4	1859.97	1690.96	1456.13	1380.14	1342.09	1259.22	1223.07		

**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	\$201.15	\$201.15	\$219.87	\$224.19	\$296.85	1	\$211.81	\$211.81	\$226.79	\$243.81	\$319.52
2	139.54	139.54	155.83	160.42	218.00	2	148.58	148.58	162.74	178.58	235.26
3-5	99.61	99.61	117.02	121.74	172.65	3-5	109.09	109.09	124.11	141.05	191.19
6-8	68.78	68.78	88.53	93.45	139.60	6-8	79.84	79.84	95.65	113.76	158.75
9-11	51.00	51.00	69.54	74.43	114.72	9-11	62.03	62.03	76.71	93.14	131.67
12-23	42.72	42.72	60.88	65.83	101.48	12-23	52.91	52.91	68.00	82.18	117.08
24-47	36.87	36.87	53.76	58.56	92.68	24-47	45.09	45.09	60.47	74.92	108.28
48-71	32.05	32.05	48.63	53.80	86.92	48-71	40.32	40.32	55.36	70.15	102.51
72-95	29.35	29.35	45.09	50.17	82.53	72-95	37.95	37.95	52.28	66.53	98.16
96-143	26.03	26.03	41.86	47.12		96-143	34.82	34.82	49.05	63.58	
144-239	24.43	24.43	40.32	45.21		144-239	33.22	33.22	47.09	61.61	
240-479	22.89	22.89	38.76	76.03		240-479	31.64	31.64	45.45	57.73	
480-719	21.27	21.27	37.21	42.33		480-719	30.14	30.14	44.30		
720	20.64	20.64	36.35	41.33		720	29.35	29.35	43.14		
<b>ADD TO ABOVE FOR EACH PIECE:</b>											
INTERRUPTED THREAD	8.35	8.35	14.70	16.35	23.83	INTERRUPTED THREAD	11.86	11.86	17.36	23.08	28.96
SPIRAL FLUTE	7.23	7.23	12.73			SPIRAL FLUTE	8.87	8.87	12.42		
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	\$227.63	\$227.63	\$241.49	\$265.50	\$350.98	1	\$250.48	\$285.57	\$315.41	\$421.49	\$448.44
2	161.98	161.98	176.02	195.81	262.15	2	180.19	211.86	237.85	321.63	348.62
3-5	122.58	122.58	139.08	159.34	217.14	3-5	143.03	175.12	201.41	276.11	303.10
6-8	96.03	96.03	111.47	132.49	186.57	6-8	116.21	149.34	173.27	244.36	271.39
9-11	75.92	75.92	89.99	110.07	159.58	9-11	93.35	127.24	150.92	219.88	246.86
12-23	65.54	65.54	79.03	98.02	141.49	12-23	81.39	112.25	135.99	201.13	228.10
24-47	58.49	58.49	71.89	90.74	132.70	24-47	74.31	104.33	128.71	186.57	213.56
48-71	53.76	53.76	67.19	85.97	126.94	48-71	69.54	99.61	123.94	165.75	192.74
72-95	49.78	49.78	63.26	82.39		72-95	65.54	96.45	120.34		
96-143	47.09	47.09	60.88	79.39		96-143	62.44	93.35	117.36		
144-239	45.09	45.09	58.49	77.43		144-239	60.88	87.03	111.52		
240-479	43.44	43.44	54.55	73.55		240-479	56.92				
480-719	41.86	41.86				480-719					
720	41.12	41.12				720					
<b>ADD TO ABOVE FOR EACH PIECE:</b>											
INTERRUPTED THREAD	14.59	14.59	19.22	25.77	32.43	INTERRUPTED THREAD	20.06	30.70	38.99	47.99	55.80
SPIRAL FLUTE	12.55	12.55	16.42			SPIRAL FLUTE	17.15	26.09			



## 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
1	\$292.95	\$347.99	\$411.54	\$526.44	\$593.66	1	\$351.08	\$420.30	\$497.64	\$651.68	\$756.92
2	215.33	266.59	324.03	425.44	512.46	2	263.98	333.69	427.25	570.47	673.65
3-5	175.90	229.63	280.84	375.65	448.37	3-5	223.93	290.40	371.65	527.06	590.33
6-8	149.20	199.82	253.30	343.96	405.68	6-8	196.31	262.73	334.65	463.69	548.69
9-11	125.50	176.28	232.06	319.43	378.11	9-11	175.12	241.68	310.76	436.15	517.43
12-23	109.91	160.25	215.82	300.71	353.61	12-23	158.55	225.20	298.49	411.64	496.63
24-47	102.45	152.85	185.16	265.30	318.23	24-47	145.89	194.20	258.85	376.25	455.00
48-71	97.19	147.98				48-71	127.58				
72-95	93.41	143.76									
96-143	90.50	140.84									
144-239	84.27	134.61									

**ADD TO ABOVE FOR EACH PIECE:**

INTERRUPTED THREAD	29.44	47.36	64.83	80.52	96.60	INTERRUPTED THREAD	25.56	38.96	51.78	65.24	78.86
SPIRAL FLUTE	25.32	40.22	55.60			SPIRAL FLUTE	38.24				

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	\$427.51	1	\$533.74	1	\$677.10
2	339.52	2	459.98	2	601.10
3-5	296.19	3-5	401.19	3-5	525.07
6-8	268.57	6-8	362.41	6-8	487.10
9-11	247.02	9-11	337.23	9-11	458.56
12-23	230.42	12-23	314.81	12-23	439.61
24	199.66	24	282.47	24	401.60

**ADD TO ABOVE FOR EACH PIECE:**

INTERRUPTED THREAD	39.91	INTERRUPTED THREAD	56.25	INTERRUPTED THREAD	80.42
SPIRAL FLUTE	59.83	SPIRAL FLUTE	84.68	SPIRAL FLUTE	130.04

	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	\$813.98	\$1024.28	\$1165.60	\$1470.84	\$1396.97	\$1807.53	\$1860.70	\$2417.28
2	719.07	929.39	1003.91	1309.35	1235.00	1646.16	1651.67	2208.29
3-5	623.96	834.23	842.52	1148.99	1073.97	1484.58	1490.34	2046.85
6-8	557.55	767.74	766.54	1071.88	997.88	1408.64	1338.64	1894.80
9-11	519.46	729.85	728.51	1033.84	959.96	1370.65	1281.16	1837.78
12-23	500.44	710.80	709.50	1014.90	940.47	1351.66	1224.23	1780.76
24	462.51	672.82	671.42	976.84	903.02	1313.60		

**ADD TO ABOVE FOR EACH PIECE:**

INTERRUPTED THREAD	87.81	127.51	171.43	232.38
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## 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	\$209.57		\$223.58	1		\$204.05	\$216.17		1	\$203.39
2	145.28	157.87	2	139.74	150.47	2	139.08	149.72	2	138.25	147.08
3-5	103.46	116.49	3-5	97.94	109.04	3-5	97.29	108.34	3-5	96.46	105.68
6-8	68.24	81.90	6-8	62.96	74.84	6-8	62.34	74.11	6-8	61.57	71.61
9-11	50.49	62.96	9-11	45.21	55.90	9-11	44.60	55.20	9-11	43.82	52.69
12-23	42.41	54.95	12-23	37.14	47.89	12-23	36.52	47.19	12-23	35.72	44.69
24-47	36.20	47.49	24-47	30.94	40.43	24-47	30.30	39.73	24-47	29.52	37.22
48-71	31.50	42.80	48-71	26.22	35.72	48-71	25.60	35.02	48-71	24.81	32.51
72-95	28.58	40.28	72-95	23.32	33.22	72-95	22.69	32.51	72-95	21.92	30.00
96	25.75	37.30	96	20.49	30.24	96	19.88	29.52	96	19.09	27.00
FOR SPIRAL POINT ADD TO EACH PIECE:											
	2.28	4.71		2.20	3.69		2.12	3.54		2.04	3.14

## 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	\$193.32	\$203.11	\$220.99	\$229.04		\$236.95	1	\$193.93	\$203.11	\$221.89
2	132.07	139.88	153.82	160.77	168.26	2	132.70	139.88	154.46	162.10	169.58
3-5	92.27	100.41	113.17	119.55	128.77	3-5	92.88	100.41	113.61	120.86	130.10
6-8	61.94	71.20	83.17	87.55	95.25	6-8	62.58	71.20	83.85	88.80	96.49
9-11	44.20	52.28	63.26	67.36	74.59	9-11	44.84	52.28	63.65	68.63	75.85
12-23	36.11	43.94	54.15	57.56	63.61	12-23	36.75	43.94	54.61	58.81	64.85
24-47	29.92	36.35	46.28	50.27	56.30	24-47	30.53	36.35	47.12	51.51	57.56
48-71	25.20	31.64	41.24	45.46	51.51	48-71	25.83	31.64	42.13	46.73	52.77
72-95	22.31	29.35	37.55	41.85	47.89	72-95	22.93	29.35	38.01	43.11	49.16
96	19.47	26.03	34.40	38.87	44.91	96	20.10	26.03	35.20	40.13	46.18
FOR SPIRAL POINT ADD TO EACH PIECE:											
	2.04	3.25	4.32	4.95	5.89		2.19	3.25	4.32	5.11	6.05

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	\$194.49	\$206.66	\$227.67	\$236.66		\$243.86	1	\$219.07	\$212.57	\$232.93
2	133.24	143.81	159.08	167.75	175.19	2	151.78	148.16	164.94	175.90	186.72
3-5	93.44	104.04	117.70	128.14	135.71	3-5	103.52	109.09	123.55	136.33	148.32
6-8	63.13	74.72	90.07	99.16	101.83	6-8	73.98	80.56	95.80	107.47	119.84
9-11	45.39	55.80	69.03	77.70	81.18	9-11	52.85	61.71	74.73	85.96	96.24
12-23	37.30	47.95	58.60	66.13	70.20	12-23	44.40	52.91	64.51	74.42	83.47
24-47	31.09	40.32	50.86	58.32	62.90	24-47	37.86	45.09	56.58	66.66	76.06
48-71	26.39	35.61	45.88	52.87	58.10	48-71	32.83	40.77	51.52	61.67	70.61
72-95	23.47	32.87	41.13	49.59	54.49	72-95	29.92	37.21	47.95	57.86	66.87
FOR SPIRAL POINT ADD TO EACH PIECE:											
	2.28	3.81	5.05	5.99	6.83		2.60	4.46	5.86	7.41	8.74



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

1/2"	O.A.L.	O.A.L.	O.A.L.	O.A.L.	O.A.L.	9/16"	O.A.L.	O.A.L.	O.A.L.	O.A.L.	O.A.L.
QTY.	4"	6"	8"	10"	12"	QTY.	4"	6"	8"	10"	12"
1	\$225.72	\$214.63	\$238.57	\$248.68	\$264.32	1	-	\$238.57	\$254.62	\$273.61	\$285.42
2	156.53	150.09	170.25	180.06	190.83	2	-	168.24	182.72	196.80	208.61
3-5	108.58	111.11	130.60	140.45	151.97	3-5	-	125.57	141.38	156.57	168.39
6-8	77.98	82.66	101.58	111.55	123.97	6-8	-	89.93	105.95	121.17	132.18
9-11	58.20	63.26	80.21	90.07	99.99	9-11	-	69.95	84.34	97.40	108.66
12-23	49.51	54.55	68.56	78.49	87.61	12-23	-	60.91	72.83	84.74	96.01
24-47	41.74	47.43	60.74	70.61	79.84	24-47	-	53.28	65.20	77.12	88.35
48-71	36.75	42.72	55.89	65.77	74.73	48-71	-	48.26	60.18	72.09	83.36
FOR SPIRAL POINT ADD TO EACH PIECE:											
	3.25	4.72	6.41	7.96	9.32		-	5.26	7.06	8.88	10.52

5/8"	O.A.L.	O.A.L.	O.A.L.	O.A.L.	O.A.L.	3/4"	O.A.L.	O.A.L.	O.A.L.	O.A.L.	O.A.L.
QTY.	6"	8"	10"	12"	14"	QTY.	6"	8"	10"	12"	14"
1	\$227.94	\$265.71	\$285.81	\$305.69	\$318.89	1	\$253.00	\$285.28	\$310.62	\$326.31	\$349.84
2	163.68	192.19	208.18	223.93	237.16	2	184.66	204.17	228.91	244.53	262.73
3-5	124.11	153.82	169.29	186.00	198.34	3-5	145.34	169.22	189.94	205.73	222.93
6-8	97.19	125.18	142.55	156.15	168.46	6-8	116.70	142.68	160.25	175.90	195.42
9-11	77.02	101.58	118.87	132.19	145.72	9-11	95.11	119.33	137.11	152.85	173.98
12-23	67.19	89.29	103.29	116.52	129.34	12-23	83.62	103.64	121.02	136.76	157.87
24-47	60.10	81.03	95.49	109.07	121.34	24-47	76.01	96.03	113.17	128.91	144.58
48-71	54.94	76.06	90.50	104.10	116.52	48	70.96	91.01	108.13	123.97	126.36
72	51.45	72.72	86.72	99.99	112.74						
FOR SPIRAL POINT ADD TO EACH PIECE:											
	6.37	9.60	11.72	13.72	15.62		8.70	11.72	14.34	16.74	19.10

7/8"	O.A.L.	O.A.L.	O.A.L.	O.A.L.	1"	O.A.L.	O.A.L.	O.A.L.	O.A.L.
QUANTITY	6"	8"	10"	12"	QUANTITY	6"	8"	10"	12"
1	\$328.98	\$362.23	\$397.90	\$421.10	1	\$337.64	\$393.68	\$433.30	\$464.17
2	240.21	268.44	298.07	321.25	2	248.83	293.78	332.33	363.20
3-5	195.18	224.42	252.55	275.72	3-5	203.80	248.26	282.53	313.41
6-8	164.60	190.35	220.81	244.03	6-8	173.24	216.57	250.84	281.69
9-11	137.63	163.39	196.32	219.52	9-11	146.22	192.05	226.32	257.18
12-23	119.54	145.28	177.57	200.75	12-23	128.17	173.33	207.56	238.44
24	110.74	136.48	163.01	186.20	24	119.39	158.75	172.17	203.02
FOR SPIRAL POINT ADD TO EACH PIECE:									
	11.75	15.05	18.50	21.52		12.82	18.00	22.42	26.47

## 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	Precipitation Hardening, Stainless	Tempered	15-25
		as Cast		Treated	10-15
		Tempered		Annealed	15-45
	Gray,	Annealed		Tempered	15-25
		As Cast		35-60	Annealed
	Malleable	60		Free Machining, Tool Steels, High Speed	Annealed
Magnesium Alloys	Heat Treated	25-50	Water Hardening	Annealed	50
	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.

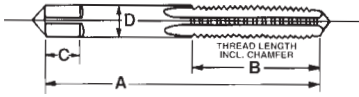


## TAP DRILL SIZES AND PERCENTAGE OF THREADS

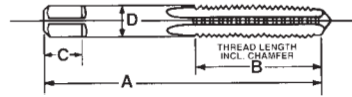
TAP		TAP DRILL	DECIM. EQUIV.	THEOR. % OF THREAD	TAP		TAP DRILL	DECIM. EQUIV.	THEOR. % OF THREAD	TAP		TAP DRILL	DECIM. EQUIV.	THEOR. % OF THREAD
NOM. SIZE	TPI				NOM. SIZE	TPI				NOM. SIZE	TPI			
0	80	#56	.0465	83	1/4	20	13/64	.2031	72	5/8	18	9/16	.5625	87
		3/64	.0469	81			#6	.2040	71			0.5687	.5687	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	3/32	.0938	67	3/8	20	O	.3160	73	13/16	12	47/64	.7344	72
		#41	.0960	59			P	.3230	80			13/16	16	3/4
5	40	#40	.0980	83	3/8	24	Q	.3320	66	13/16	20	49/64	.7656	72
		#39	.0995	79			Q	.3320	79			13/16	28	25/32
5	44	#38	.1015	72	3/8	28	R	.3390	67	13/16	32	25/32	.7812	77
		#37	.1040	65			11/32	.3438	67			7/8	9	49/64
6	32	#38	.1015	80	3/8	32	R	.3390	78	7/8	12	25/32	.7812	87
		#37	.1040	71			11/32	.3438	77			51/64	.7969	72
6	40	#36	.1065	63	3/8	36	S	.3480	67	7/8	14	0.8024	.8024	78
		#37	.1040	84			S	.3480	75			13/16	16	.8125
6	40	7/64	.1094	70	7/16	14	T	.3580	86	7/8	16	13/16	.8125	77
		#35	.1100	69			23/64	.3594	84			7/8	20	53/64
6	40	#34	.1110	67	7/16	16	3/8	.3750	77	7/8	28	27/32	.8438	67
		#33	.1130	77			V	.3770	75			7/8	32	27/32
8	32	#34	.1110	83	7/16	20	W	.3860	79	15/16	12	27/32	.8438	87
		#33	.1130	77			25/64	.3906	72			55/64	.8594	72
8	36	#32	.1160	68	7/16	28	Y	.4040	72	15/16	16	7/8	.8750	77
		#29	.1360	69			Y	.4040	83			15/16	20	57/64
8	36	#29	.1360	78	1/2	12	13/32	.4062	77	15/16	28	29/32	.9062	67
		#28	.1405	65			Z	.4130	80			15/16	32	29/32
10	24	9/64	.1406	65	1/2	13	27/64	.4219	72	15/16	8	55/64	.8594	87
		#27	.1440	85			27/64	.4219	72			7/8	.8750	77
10	32	#26	.1470	79	1/2	16	7/16	.4375	77	1	12	29/32	.9062	87
		#25	.1495	75			29/64	.4531	72			59/64	.9219	72
10	32	#24	.1520	70	1/2	20	15/32	.4688	67	1	14	0.9274	.9274	78
		#23	.1540	66			15/32	.4688	77			15/16	16	.9375
10	32	5/32	.1562	83	9/16	12	15/32	.4688	87	1	16	15/16	.9375	77
		#22	.1570	81			31/64	.4844	72			1	20	61/64
12	24	#21	.1590	76	9/16	18	1/2	.5000	77	1	28	31/32	.9688	67
		#20	.1610	71			0.5062	.5062	69			1	32	31/32
12	28	#17	.1730	79	9/16	20	1/2	.5000	87	1 1/16	8	59/64	.9219	87
		#16	.1770	72			0.5062	.5062	78			1 1/16	12	31/32
12	32	#15	.1800	67	9/16	24	33/64	.5156	72	1 1/16	16	1	1.0000	77
		#16	.1770	84			33/64	.5156	87			1 1/16	18	1
12	32	#15	.1800	78	9/16	28	0.5203	.5203	78	1 1/16	20	11/64	1.0156	72
		#14	.1820	73			17/32	.5312	67			1 1/16	16	1
12	32	#13	.1850	67	9/16	32	17/32	.5312	77	1 1/16	18	1	1.0000	87
		#14	.1820	84			5/8	11	17/32			.5312	79	1 1/16
1/4	20	#13	.1850	76	5/8	12	0.5263	.5263	78	1 1/16	16	1	1.0000	77
		3/16	.1875	70			17/32	.5312	77			1 1/16	18	1
1/4	20	#12	.1890	67	5/8	16	17/32	.5312	79	1 1/16	20	11/64	1.0156	72
		#9	.1960	83			35/64	.5469	72			1 1/16	16	1
1/4	20	#8	.1990	79	5/8	16	9/16	.5625	77	1 1/16	20	11/64	1.0156	72
		#7	.2010	75			0.5687	.5687	69			1 1/16	20	11/64

## STANDARD TAP DIMENSIONS, GROUND THREAD

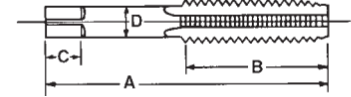
### General Dimensions



STYLE 1



STYLE 2

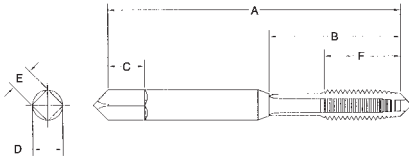


STYLE 3

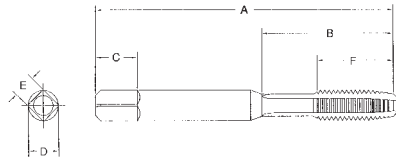
NOMINAL DIAMETER RANGE - INCHES		MACHINE SCREW SIZE NO.	NOMINAL FRACTIONAL DIAMETER INCHES	NOMINAL METRIC DIAMETER MILLIMETER	STYLE*	TAP DIMENSIONS - INCHES				
OVER	TO (INCL.)					O/A LENGTH A	THD. LGTH. B	SQ. LGTH. C	SHANK DIA. D	SIZE OF SQ. E
.052	.065	0	1/16	M1.6	1	1 5/8	5/16	3/16	.141	.110
.065	.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.

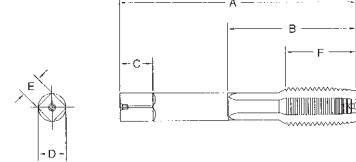
## CNC DESIGN TAP DIMENSIONS, GROUND THREAD



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
	#29	.1360	60		37/64	.5781	68		32mm	1.2598	77
M4.5X.75	3.75mm	.1476	77	M18X2.5	15.5mm	.6102	77	M36X4	1 17/64	1.2656	74
	#25	.1495	72		5/8	.6250	65		1 19/64	1.2969	78
M5X.8	4.2mm	.1654	77	M18X1.5	16.5mm	.6496	77	M36X3	33mm	1.2992	77
	#18	.1695	67		21/32	.6562	68		1 5/16	1.3125	68
M6X1	5mm	.1969	77	M20X2.5	17.5mm	.6890	77	M39X4	1 3/8	1.3750	78
	#8	.1990	73		45/64	.7031	66		35mm	1.3780	77
M7X1	6mm	.2362	77	M20X1.5	18.5mm	.7283	77	M39X3	1 25/64	1.3906	71
	B	.2380	74		47/64	.7344	69		36mm	1.4173	77
M8X1.25	6.75mm	.2657	77	M22X2.5	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

