

# Tapping Speeds

## Standard Taps

Material	Tapping Speed SFM
Aluminum Alloys	90-100
Brass	60-100
Bronze	40-60
Copper	40-60
High Temperature Alloys	5-10
Cobalt Base	10-15
Iron Base	5-10
Nickel Base	60
Iron, Ductile	30
Annealed	15-20
as Cast	80
Tempered	35-60
Gray	60
Annealed	25-50
as Cast	175
Malleable	20
Heat Treated	50
Magnesium Alloys	20
Annealed	50
Manganese	20
Molybdenum Alloys	20
Stress Relieved	25
Monel	25
Annealed	25
Nickel Alloys	25
Annealed	25
Plastics, Reinforced	50
Thermoplastics	50
Thermosetting Plastics	50
Steels, Alloys, Annealed or Cold Drawn	40-60
Quenched & Tempered	15-35
Armor Plate	10

Material	Tapping Speed SFM
(Steels Cont.)	
Carbon Steel, Plain	Annealed 40-80
Tempered	15-40
Cast Carbon	Annealed 40-50
Tempered	30
Cast, Corrosion Resistant	Annealed 20-30
Heat Resistant	as Cast 20-25
Low Alloy	Annealed 30-45
Tempered	15-25
Precipitation Hardening	Treated 10-15
Stainless	Annealed 15-45
Tempered	15-75
Free Machining	Annealed 45-75
Tool Steels, High Speed	Annealed 15-25
Water Hardening	Annealed 50
Ultra High Strength Steels	Annealed 35
Normalized	20
Tempered	3-7
Maraging Steels	Annealed 20-15
Maraged	5-10
Tantalum Alloys	Stress Relieved 3
Titanium Alloys	
Commercial Pure	Annealed 40-60
Alpha & Alpha Beta Alloys	Annealed 10-25
Tungsten Alloys, Pressed & Sintered	50
Zinc Alloys	Die Cast 150

## CONVERSION TABLE

Surface Feet Per Minute to Revolutions Per Minute

SFM	20	25	30	40	50	60	70	80	90	100	110	120	130	140	150
TAP SIZE	REVOLUTIONS PER MINUTE														
0	1270	1590	1910	2540	3100	3850	4450	5100	5750	6350	7000	7650	8200	8900	9550
1	1040	1310	1550	2100	2600	3140	3650	4150	4710	5200	5750	6250	6800	7300	7850
2	850	1100	1300	1750	2250	2650	3100	3550	4000	4450	4850	5350	5750	6200	6650
3	750	950	1150	1550	1900	2300	2700	3050	3450	3850	4250	4600	5000	5400	5750
4	650	850	1050	1350	1700	2050	2300	2700	3050	3400	3750	4100	4450	4750	5100
5	600	750	900	1200	1550	1850	2100	2400	2750	3100	3350	3650	3950	4250	4550
6	550	650	850	1100	1350	1650	1950	2200	2450	2750	3050	3300	3600	3850	4150
8	450	580	700	950	1150	1400	1650	1850	2100	2350	2550	2800	3000	3250	3500
10	400	500	600	800	1005	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000
12	350	450	550	700	850	1050	1250	1400	1550	1750	1950	2100	2300	2450	2650
1/4	300	380	450	600	750	900	1050	1200	1350	1500	1650	1800	1950	2150	2300
5/16	250	300	350	480	600	750	850	950	1100	1250	1350	1450	1550	1700	1850
3/8	200	250	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
7/16	170	210	250	350	450	520	600	700	750	850	950	1050	1150	1250	1300
1/2	150	190	220	300	350	450	530	600	650	750	850	900	950	1050	1150
9/16	130	170	200	250	350	400	450	550	600	650	750	800	900	950	1050
5/8	120	150	180	250	300	350	400	450	550	600	650	750	800	850	900
3/4	100	120	150	200	250	300	350	400	450	500	550	600	650	700	750
7/8	80	100	130	170	200	250	300	350	400	450	480	520	550	600	650
1	70	90	100	150	190	230	260	300	350	380	420	450	500	530	570

The material being tapped is the primary factor in determining the most effective TAPPING SPEED. However there are a number of other factors which may require consideration. Among these are: thread pitch, thread length, percent of thread, lubrication, tap flute style and chamfer, equipment and method of tapping. The best speed is determined by experiment on the job. The table below lists speeds which have proven satisfactory under average conditions.