TECHNICAL DATA

Speeds and Feeds Conversion Table

Surface Feet Per Minute To Revolutions Per Minute

VEGA CUTTING TOOLS

Tap Size	Revolutions Per Minute														
	Surface Feet per Minute														
	20	25	30	40	50	60	70	80	90	100	110	120	130	140	150
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	3556	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	402	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

Pipe Taps

Tap Size	Decimal	Revolutions Per Minute								
		Surface Feet per Minute								
		8	12	15	18	20	25	30	35	40
1/16 NPT	0.3058	100	150	187	225	250	312	375	437	499
1/8 NPT	0.3983	77	115	144	173	192	240	288	336	383
1/4 NPT	0.5286	58	87	108	130	144	181	217	253	289
3/8 NPT	0.664	46	69	86	104	115	144	173	201	230
1/2 NPT	0.826	37	55	69	83	92	116	139	162	185
3/4 NPT	1.0364	29	44	55	66	74	92	111	129	147
1 NPT	1.2965	24	35	44	53	59	74	88	103	118
1-1/4 NPT	1.6412	19	28	35	42	47	58	70	81	93
1-1/2 NPT	1.8803	16	24	30	37	41	51	61	71	81
2 NPT	2.3542	13	19	24	29	32	41	49	57	65

Proper tapping speeds are very important in obtaining efficient tapping results.
There are many factors which affect proper tapping speeds, some of which are listed below:

MATERIAL FACTORS:
- Thermo-conductivity of the material and wall thickness as it affects heat dispersion
- Variations in carbon content of steel
- Hard spots in material
- Depth of hole to be tapped
- Percentage of full thread to be tapped

TAP FACTORS:
- Major diameters, pitch and lead
- Style of tap
- Width of lands
- Amount of hook or rake
- Length of chamfer
- Bottoming Taps normally require slower speeds than Plug Chamfered Taps

MECHANICAL FACTORS:
- Type of tapping machine and holder
- Speeds for small diameter taps are often governed by the limitations of the machine
- Condition of tapping machine and spindle
- Type of fixture
- Vertical or horizontal tapping (faster speeds for vertical tapping)
- Method of feeding the tap
- Cutting fluid used and method of application

The optimum speed for tapping is the highest speed that conditions permit, consistent with economic tool life.

Proper tapping speeds are determined best by experiment. In the table above, speeds shown should be used as a guide only, and the suggested surface feet per minute adjusted upward or downward until the best results are obtained.