



REFERENCE

Cutting Speed Conversions

Feet/Minute to Revolutions/Minute

Diameter (Inch)	Cutting Speed – Feet/Minute												
	5	10	25	50	75	100	150	200	250	300	350	400	500
	Revolutions/Minute (RPM)												
1/16	306	611	1528	3056	4584	6112	9167	12223	15279	18335	21390	24446	30557
1/8	153	306	764	1528	2292	3056	4584	6112	7639	9167	10696	12223	15279
3/16	102	204	509	1019	1528	2037	3056	4074	5093	6112	7130	8149	10186
1/4	76	153	382	764	1146	1529	2292	3056	3820	4584	5348	6112	7639
5/16	61	122	306	611	917	1222	1833	2445	3056	3667	4278	4889	6112
3/8	51	102	255	509	764	1019	1528	2037	2546	3056	3565	4074	5093
7/16	44	87	281	437	655	873	1310	1746	2183	2619	3056	3492	4365
1/2	38	76	191	382	573	764	1146	1528	1910	2291	2674	3056	3820
5/8	31	61	153	306	458	611	917	1222	1528	1833	2139	2445	3056
3/4	26	51	127	255	382	509	764	1019	1273	1528	1783	2037	2546
7/8	22	44	109	218	327	437	655	873	1091	1310	1528	1746	2183
1	19	38	95	191	286	382	573	764	955	1146	1337	1528	1910
1-1/8	17	34	85	170	255	340	509	679	849	1019	1188	1358	1698
1-1/4	15	31	76	153	229	306	458	611	764	917	1070	1222	1528
1-3/8	14	28	70	139	208	278	417	556	694	833	972	1111	1389
1-1/2	13	26	64	127	191	255	382	509	637	764	891	1019	1273
1-5/8	12	24	59	118	176	235	353	470	588	705	823	940	1175
1-3/4	11	22	55	109	164	218	327	437	546	655	764	873	1091
1-7/8	10	20	51	102	153	204	306	407	509	611	713	815	1019
2	9	19	48	95	143	191	286	382	477	573	668	764	955
2-1/4	8	17	42	85	127	170	255	340	424	509	594	679	849
2-1/2	7	15	38	76	115	153	229	306	382	458	535	611	764
2-3/4	7	14	35	69	104	139	208	278	347	417	486	556	694
3	6	13	32	64	96	127	191	255	318	382	446	509	637
3-1/4	6	12	29	59	88	118	176	235	294	353	411	470	588
3-1/2	5	11	27	55	82	109	164	218	273	327	382	437	546
3-3/4	5	10	25	51	76	102	153	204	255	306	357	407	509
4	4	9	24	48	72	96	143	191	239	286	334	382	477

Formula

Unknown Units	Known Units	Formula Required (Inch)	Formula Required (Metric)
Vc (Surface Speed)	D & RPM	$0.262 \times D \times \text{RPM}$	$0.0031 \times D \times \text{RPM}$
RPM (Rev/Min)	D & Vc	$\frac{Vc}{D \times 0.262}$	$\frac{318 \times Vc}{D}$
Fr (Feed/Rev)	RPM & Fm	$\frac{Fm}{\text{RPM}}$	$\frac{Fm}{\text{RPM}}$
Fm (Feed/Min)	RPM & Fr	$\text{RPM} \times Fr$	$\text{RPM} \times Fr$

Legend

Symbol	Description
Vc	Surface speed in feet or meters per minute
RPM	Revolutions per minute
Fr	Feed per revolution in inch or millimeter
Fm	Feed per minute in inch or millimeter
D	Diameter in inch or millimeter