



CARBIDE GRADES

GRADE	CHARACTERISTICS	ISO APPLICATION	PROPERTIES
A	Combination of toughness, heat and wear resistance	P30, K30	91.8 RA 14.0 Density 290,000 TRS 9.0% TiC/TaC 6.0% Cobalt
B	Excellent wear and crater resistance	P25	92.4 RA 13.15 Density 270,000 TRS 10.5% TiC/TaC 7.0% Cobalt
F	High strength and abrasion resistance	K5, K10	93.2 RA 14.80 Density 500,000 TRS 6.0% Cobalt
K	High edge strength and toughness	K15, K30	92.5 RA 14.68 Density 510,000 TRS 8.0% Cobalt

Cole offers a range of coatings and hones tailored to the application.



RPM TABLE – Size/Material/SFPM*

SIZE	75/125 TITANIUM	125/150 INCONEL 718	150/200 C-276/INC. 925	200/250 HAST. G3/G50	250/350 22CR/SM2550	325/375 INCOLOY 825
2 1/16	139 to 232	232 to 278	278 to 371	371 to 463	463 to 648	602 to 695
2 3/8	121 to 201	201 to 241	241 to 322	322 to 402	402 to 563	523 to 603
2 7/8	100 to 166	166 to 199	199 to 266	266 to 332	332 to 465	432 to 498
3 1/2	82 to 136	136 to 164	164 to 218	218 to 273	273 to 382	355 to 409
4	72 to 119	119 to 143	143 to 191	191 to 239	239 to 334	310 to 358
4 1/2	64 to 106	106 to 127	127 to 170	170 to 212	212 to 297	276 to 318
5	57 to 96	96 to 115	115 to 153	153 to 191	191 to 267	248 to 286
5 1/2	52 to 87	87 to 104	104 to 139	139 to 174	174 to 243	226 to 260
6 1/8	47 to 78	78 to 94	94 to 125	125 to 156	156 to 218	203 to 234
6 5/8	43 to 72	72 to 86	86 to 115	115 to 144	144 to 202	187 to 216
7	41 to 68	68 to 82	82 to 109	109 to 136	136 to 191	177 to 205
7 5/8	38 to 63	63 to 75	75 to 100	100 to 125	125 to 175	163 to 188
8	36 to 60	60 to 72	72 to 96	96 to 119	119 to 167	155 to 179
8 5/8	33 to 55	55 to 66	66 to 89	89 to 111	111 to 155	144 to 166
9 5/8	30 to 50	50 to 60	60 to 79	79 to 99	99 to 139	129 to 149
10 3/4	27 to 44	44 to 53	53 to 71	71 to 89	89 to 124	115 to 133
11.338	25 to 42	42 to 51	51 to 67	67 to 84	84 to 118	109 to 126
11 3/4	24 to 41	41 to 49	49 to 65	65 to 81	81 to 114	106 to 122
11 7/8	24 to 40	40 to 48	48 to 64	64 to 80	80 to 113	105 to 121
13 3/8	21 to 36	36 to 43	43 to 57	57 to 71	71 to 100	93 to 107
13 5/8	21 to 35	35 to 42	42 to 56	56 to 70	70 to 98	91 to 105
14	20 to 34	34 to 41	41 to 55	55 to 68	68 to 96	89 to 102

*Tables for reference only. Cole Carbide is not responsible for the use of this data.



RPM TABLE – Size/Material/SFPM*

SIZE	375/425 Q-125	425/525 13CR/P-110	525/550 S-90/S-95	550/600 C-90/C-95/T-95	600/650 C-75/N-80/L-80	650/750 J/K-55
2 1/16	695 to 787	787 to 973	973 to 1019	1019 to 1112	1112 to 1204	1204 to 1389
2 3/8	603 to 684	684 to 844	844 to 885	885 to 965	965 to 1045	1045 to 1206
2 7/8	498 to 565	565 to 698	698 to 731	731 to 797	797 to 864	864 to 997
3 1/2	409 to 464	464 to 573	573 to 600	600 to 655	655 to 709	709 to 819
4	358 to 406	406 to 501	501 to 525	525 to 573	573 to 621	621 to 716
4 1/2	318 to 361	361 to 446	446 to 467	467 to 509	509 to 552	552 to 637
5	286 to 325	325 to 401	401 to 420	420 to 458	458 to 497	497 to 573
5 1/2	260 to 295	295 to 365	365 to 382	382 to 417	417 to 451	451 to 521
6 1/8	234 to 265	265 to 327	327 to 343	343 to 374	374 to 405	405 to 468
6 5/8	216 to 245	245 to 303	303 to 317	317 to 346	346 to 375	375 to 432
7	205 to 232	232 to 286	286 to 300	300 to 327	327 to 355	355 to 409
7 5/8	188 to 213	213 to 263	263 to 276	276 to 301	301 to 326	326 to 376
8	179 to 203	203 to 251	251 to 263	263 to 286	286 to 310	310 to 358
8 5/8	166 to 188	188 to 233	233 to 244	244 to 266	266 to 288	288 to 332
9 5/8	149 to 169	169 to 208	208 to 218	218 to 238	238 to 258	258 to 298
10 3/4	133 to 151	151 to 187	187 to 195	195 to 213	213 to 231	231 to 267
11.338	126 to 143	143 to 177	177 to 185	185 to 202	202 to 219	219 to 253
11 3/4	122 to 138	138 to 171	171 to 179	179 to 195	195 to 211	211 to 244
11 7/8	121 to 137	137 to 169	169 to 177	177 to 193	193 to 209	209 to 241
13 3/8	107 to 121	121 to 150	150 to 157	157 to 171	171 to 186	186 to 214
13 5/8	105 to 119	119 to 147	147 to 154	154 to 168	168 to 182	182 to 210
14	102 to 116	116 to 143	143 to 150	150 to 164	164 to 177	177 to 205



THREADING SPEEDS - RPM MIN./MAX.*

Size	Type	Grade	SFPM Min	SFPM Max	RPM Min	RPM Max
2 3/8	EUE	J55	500	650	804	1045
2 3/8	EUE	N80	425	625	684	1005
2 3/8	EUE	L80	450	560	724	901
2 7/8	EUE	J55	500	650	664	864
2 7/8	EUE	L80	450	560	598	744
2 7/8	EUE	N80	425	625	565	830
2 7/8	EUE	P110	375	525	498	698
3 1/2	EUE	C95	375	525	409	573
3 1/2	EUE	J55	500	650	546	709
3 1/2	EUE	L80	450	560	491	611
3 1/2	EUE	N80	425	625	464	682
3 1/2	EUE	P110	375	525	409	573
4	LTC	N80	425	625	406	597
4 1/2	EUE	J55	500	650	424	552
4 1/2	EUE	L80	450	560	382	475
4 1/2	LTC	C95	375	525	318	446
4 1/2	LTC	FSS95	375	525	318	446
4 1/2	LTC	K55	500	650	424	552
4 1/2	STC	K55	500	650	424	552
4 1/2	LTC	L80	450	560	382	475
4 1/2	LTC	N80	425	625	361	531
4 1/2	LTC	NSS95/P110	375	525	318	446
4 1/2	LTC	P110	375	525	318	446
4 1/2	LTC	S0095	375	525	318	446
5	LTC	K55	500	650	382	497
5	LTC	C95	375	525	287	401
5	LTC	CYP110	375	525	287	401
5	LTC	N80	425	625	325	478
5	LTC	P110	375	525	287	401
5 1/2	LTC	C95	375	525	260	365
5 1/2	LTC	CR1380	—	—	0	0
5 1/2	LTC	CR13110	—	—	0	0
5 1/2	LTC	FSS95	375	525	260	365
5 1/2	LTC	K55	500	650	347	451
5 1/2	LTC	L80	450	560	313	389
5 1/2	LTC	N80	425	625	295	434
5 1/2	LTC	NSS95/P110	375	525	260	365

Size	Type	Grade	SFPM Min	SFPM Max	RPM Min	RPM Max
5 1/2	LTC	P110	375	525	260	365
5 1/2	LTC	Q125	350	450	243	313
5 1/2	LTC	T95	375	450	260	313
5 1/2	LTC	VMS95	375	450	260	313
5 1/2	STC	K55	500	650	347	451
7	LTC	C95	375	525	205	287
7	LTC	K55	500	650	273	355
7	STC	K55	500	650	273	355
7	LTC	L80	450	560	246	306
7	LTC	N80	425	625	232	341
7	LTC	NSS95/P110	375	525	205	287
7	LTC	P110	375	525	205	287
7 5/8	LTC	K55	500	650	250	326
7 5/8	LTC	L80	450	560	225	281
7 5/8	LTC	N80	425	625	213	313
7 5/8	LTC	NSS95/P110	375	525	188	263
7 5/8	LTC	P110	375	525	188	263
7 5/8	LTC	Q125	375	450	188	225
7 5/8	LTC	VMS95	375	450	188	225
8 5/8	LTC	K55	500	650	221	228
8 5/8	LTC	L80	450	560	199	248
8 5/8	STC	K55	500	650	221	288
8 5/8	STC	L80	450	560	199	248
9 5/8	LTC	FSS95	375	525	149	208
9 5/8	LTC	K55	500	650	198	258
9 5/8	LTC	L80	450	560	179	222
9 5/8	LTC	NSS95/P110	375	525	149	208
9 5/8	LTC	P110	375	525	149	208
9 5/8	LTC	Q125	375	450	149	179
9 5/8	LTC	VMS95	375	525	149	208
9 5/8	STC	K55	500	650	198	258
10 3/4	LTC	K55	500	650	178	231
11 3/4	STC	H40	550	875	179	284
13 3/8	STC	K55	500	650	143	186
13 3/8	STC	K55	500	650	143	186
16	STC	K55	500	650	119	155
20	STC	K55	500	650	96	124

MISC. - Threading Speed Tables

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