Select the geometry

P	Steel
M	Stainless Steel
K	Cast Iron
N	Non-Ferrous
S	High-Temp Alloys
H	Hardened Materials

● first choice
○ alternate choice

Chip Control	Description	Insert Geometry	Seat Size (SSC)	Corner Radius in (mm)	Starting Conditions in (mm)	Plunge Feed Rates inch/rev (mm/rev) .0020 (0,05)	.0040 (0,10)	.0060 (0,15)	.0080 (0,20)	.0100 (0,25)	.0120 (0,30)	.0140 (0,35)
-GUP	Groove and turn inserts in new Beyond™ grades.		2	.008 (0,2)	.0031 (0,08)							
			3	.008 (0,2)	.0035 (0,09)							
				.016 (0,4)	.0043 (0,11)							
			4	.016 (0,4)	.0047 (0,12)							
				.031 (0,8)	.0059 (0,15)							

Recommended Starting Feed Rate

Pictorial View of Insert

Corner Radius

Plunge Feed Rates

Seat Size

Recommended Feed Rate Range

Primary Workpiece Material Group

P	Steel
M	Stainless Steel
K	Cast Iron
N	Non-Ferrous
S	High-Temp Alloys
H	Hardened Materials

● first choice
○ alternate choice

Chip Control Geometry Designation

Maximum Feed Rate Values

	Material Group	Feed Factor
Data above is for P and K material groups. **Maximum** feed rates should be adjusted by multiplying max feed rate values by following factors for shown material groups.	M	.8
	N	1.2
	S	.8
	H	.5

Plunge Feed Rates

● first choice
○ alternate choice

P	Steel
M	Stainless Steel
K	Cast Iron
N	Non-Ferrous
S	High-Temp Alloys
H	Hardened Materials

Chip Control	Description	Insert Geometry	Seat Size (SSC)	Corner Radius in (mm)	Starting Conditions in (mm)	Plunge Feed Rates inch/rev (mm/rev) .0020 (0,05)	.0040 (0,10)	.0060 (0,15)	.0080 (0,20)	.0100 (0,25)	.0120 (0,30)	.0140 (0,35)
-GUP	• Groove and turn inserts in new Beyond™ grades. • Available in molded and precision-ground styles. • Positive rake angle with enhanced chip control. • Available in metric widths only.		2	.008 (0,2)	.0031 (0,08)							
			3	.008 (0,2)	.0035 (0,09)							
				.016 (0,4)	.0043 (0,11)							
			4	.016 (0,4)	.0047 (0,12)							
				.031 (0,8)	.0059 (0,15)							
			5	.016 (0,4)	.0059 (0,15)							
				.031 (0,8)	.0059 (0,16)							
			6	.016 (0,4)	.0059 (0,16)							
				.031 (0,8)	.0071 (0,18)							
				.047 (1,2)	.0079 (0,20)							
			8	.016 (0,4)	.0067 (0,17)							
				.031 (0,8)	.0079 (0,20)							
				.047 (1,2)	.0087 (0,22)							
			10	.016 (0,4)	.0071 (0,18)							
				.031 (0,8)	.0087 (0,22)							
				.047 (1,2)	.0094 (0,24)							
-GMP	• Groove and turn inserts. • Available in molded and precision-ground styles. • Positive rake angle. • Available in metric widths only.		2	.008 (0,2)	.0031 (0,08)							
			3	.008 (0,2)	.0035 (0,09)							
				.016 (0,4)	.0043 (0,11)							
			4	.016 (0,4)	.0047 (0,12)							
				.031 (0,8)	.0059 (0,15)							
			5	.016 (0,4)	.0059 (0,15)							
				.031 (0,8)	.0059 (0,16)							
			6	.016 (0,4)	.0059 (0,16)							
				.031 (0,8)	.0071 (0,18)							
				.047 (1,2)	.0079 (0,20)							
			8	.016 (0,4)	.0067 (0,17)							
				.031 (0,8)	.0079 (0,20)							
				.047 (1,2)	.0087 (0,22)							
			10	.016 (0,4)	.0071 (0,18)							
				.031 (0,8)	.0087 (0,22)							
				.047 (1,2)	.0094 (0,24)							
-GMN	• Groove and turn molded and precision ground inserts. • Stable cutting edge. • Available in metric and inch widths.		2	.008 (0,2)	.0031 (0,08)							
			3	.008 (0,2)	.0035 (0,09)							
				.016 (0,4)	.0043 (0,11)							
			4	.016 (0,4)	.0047 (0,12)							
				.031 (0,8)	.0059 (0,15)							
			5	.016 (0,4)	.0059 (0,15)							
				.031 (0,8)	.0059 (0,16)							
			6	.016 (0,4)	.0059 (0,16)							
				.031 (0,8)	.0071 (0,18)							
				.047 (1,2)	.0079 (0,20)							
			8	.016 (0,4)	.0067 (0,17)							
				.031 (0,8)	.0079 (0,20)							
				.047 (1,2)	.0087 (0,22)							
			10	.016 (0,4)	.0071 (0,18)							
				.031 (0,8)	.0087 (0,22)							
				.047 (1,2)	.0094 (0,24)							

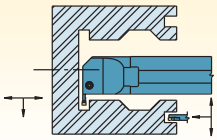
Maximum Feed Rate Values

Data above is for P and K material groups. **Maximum** feed rates should be adjusted by multiplying max feed rate values by following factors for shown material groups.

Material Group	Feed Factor
M	.8
N	.8
S	.5
H	1.2

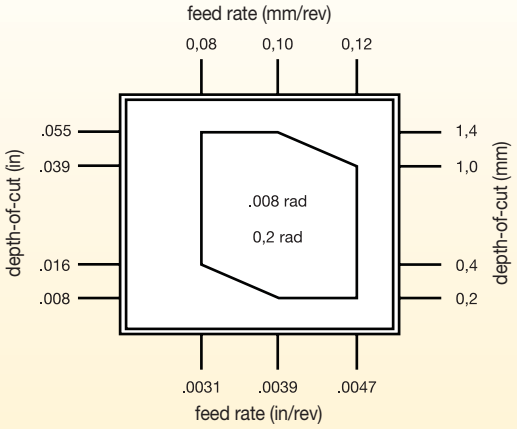
I.D. and Face Grooving

For I.D. and face grooving applications, reduce feed rate by 20%.

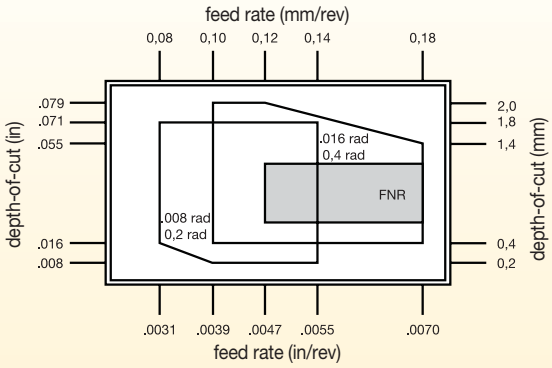


Turn and profile feed rates • GUP/GMP Geometries

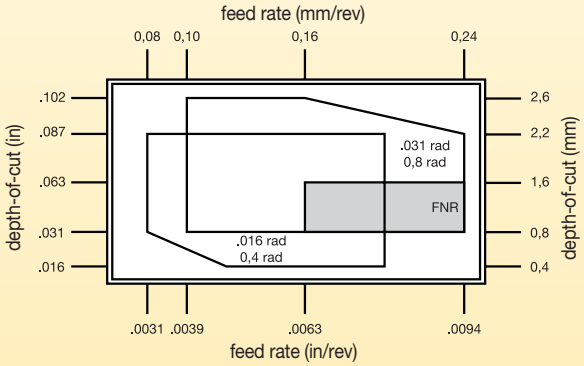
Seat Size 2



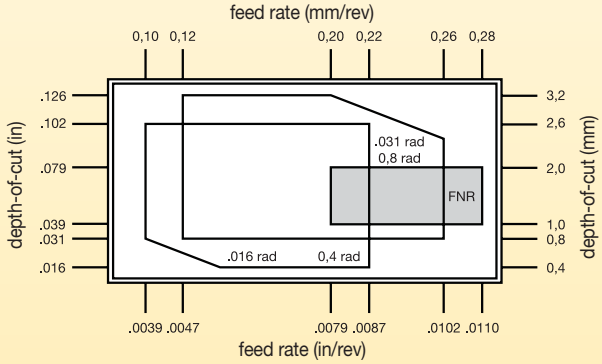
Seat Size 3



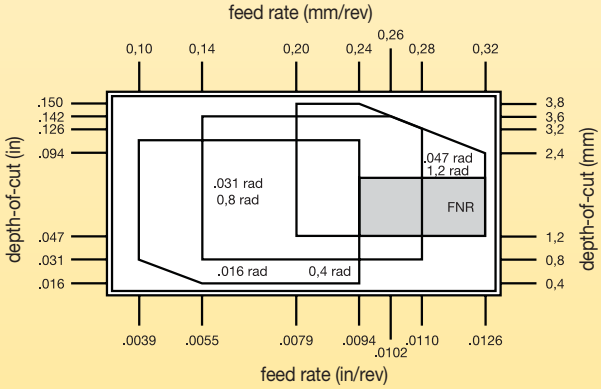
Seat Size 4



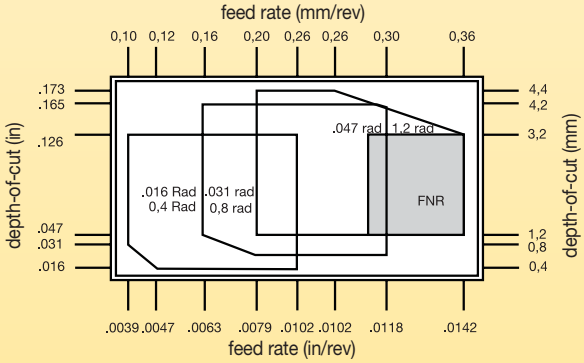
Seat Size 5



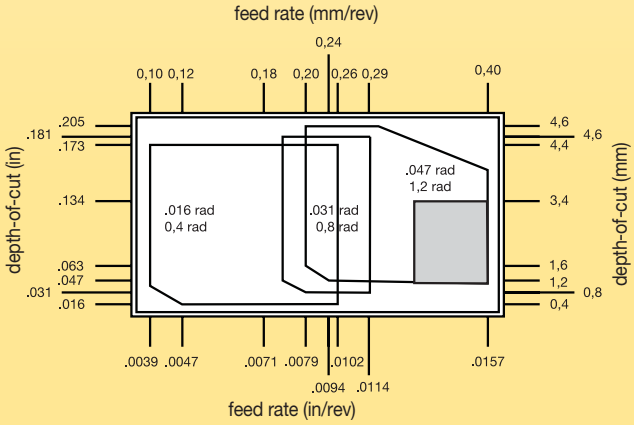
Seat Size 6



Seat Size 8

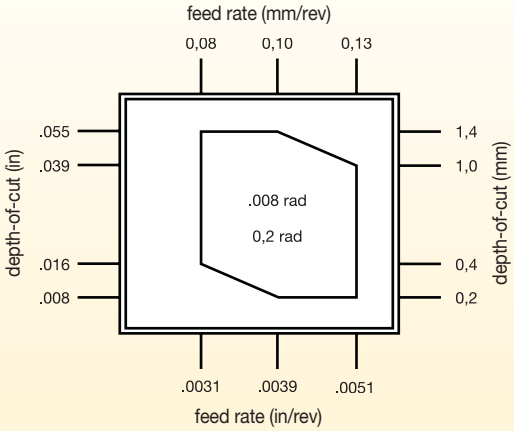


Seat Size 10

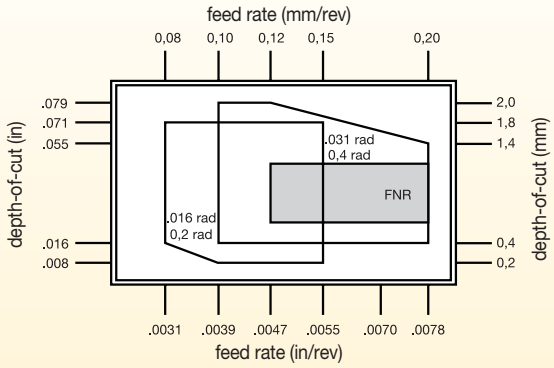


Turn and profile feed rates • GMN Geometries

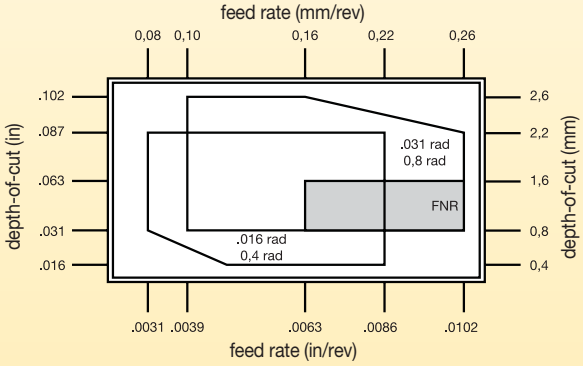
Seat Size 2



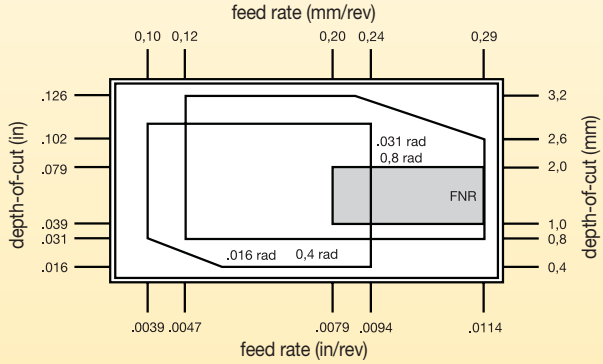
Seat Size 3



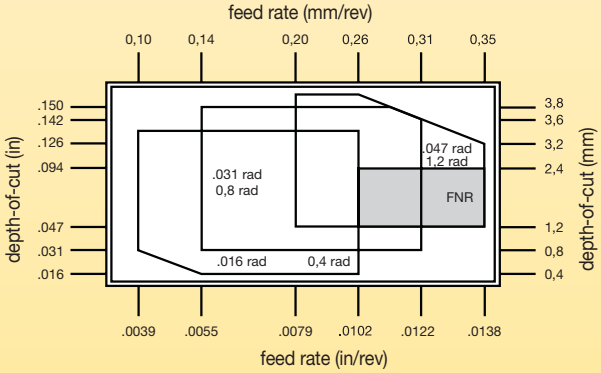
Seat Size 4



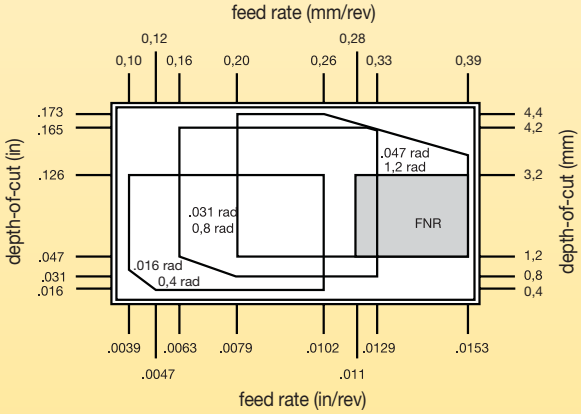
Seat Size 5



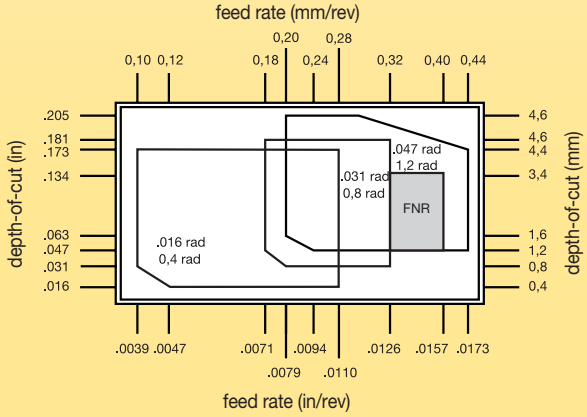
Seat Size 6



Seat Size 8



Seat Size 10



Cut-Off Feed Rates

P	Steel
M	Stainless Steel
K	Cast Iron
N	Non-Ferrous
S	High-Temp Alloys
H	Hardened Materials

● first choice
○ alternate choice

Chip Control	Description	Insert Geometry	Seat Size (SSC)	Starting Conditions in (mm)	Cut-Off Feed Rates inch/rev (mm/rev) .0020 (0,05)	.0040 (0,10)	.0060 (0,15)	.0080 (0,20)
-A4C-CF	• High positive rake angle. • Sharp cutting edge. • Available in neutral lead angle in 6° and 10° right- and left-hand styles.		1B	.0024 (0,06)				
			2/2B	.0028 (0,07)				
			3	.0035 (0,09)				
			4	.0043 (0,11)				

Maximum Feed Rate Values

	Material Group	Feed Factor
Data above is for P and K material groups. **Maximum** feed rates should be adjusted by multiplying max feed rate values by following factors for shown material groups.	M	.8
	N	.8
	S	.5
	H	1.2

Mobile Apps

The Kennametal mobile app makes it easy to access product information and calculators on both iPhone® and Android™ devices. We've highlighted a few of the key features...

There's an app for that.

SPEEDS & FEEDS
View speeds and feeds information for metalworking products.

PRODUCT AVAILABILITY
Check global availability of products. View available quantities by providing your Konnect login credentials.

CALCULATORS
Utilize our machining calculators for milling and drilling applications.

By just scanning the bar code on the insert packet, you can find the most productive cutting conditions for tool life, process time, and chip control.

NOTE: The app is currently only available in the English-language version. We have plans to translate the app in different languages with future releases.

Google play
Available on the App Store

Recommended Starting Speeds [m/min]

Material Group		K313			KCU10/KC5010			KCU25/KC5025			KCP10			KCP25			KCK20B			KY3500		
P	0–1	–	–	–	140	**280**	335	110	**225**	270	185	**400**	450	145	**290**	365	200	**440**	490	–	–	–
	2	–	–	–	140	**200**	245	110	**160**	195	185	**270**	350	145	**200**	305	200	**300**	380	–	–	–
	3	–	–	–	140	**155**	245	110	**125**	195	170	**190**	260	140	**155**	245	600	**200**	280	–	–	–
	4	–	–	–	75	**110**	170	60	**90**	135	90	**145**	200	75	**110**	180	100	**160**	220	–	–	–
	5	–	–	–	120	**200**	260	100	**160**	210	150	**220**	305	120	**200**	270	165	**240**	330	–	–	–
	6	–	–	–	110	**150**	230	85	**120**	185	120	**180**	275	110	**150**	230	130	**190**	300	–	–	–
M	1	60	**90**	120	140	**210**	260	90	**170**	245	–	–	–	–	–	–	–	–	–	–	–	–
	2	45	**75**	110	120	**200**	245	90	**150**	245	–	–	–	–	–	–	–	–	–	–	–	–
	3	35	**65**	100	120	**180**	245	90	**140**	210	–	–	–	–	–	–	–	–	–	–	–	–
K	1	30	**75**	120	120	**180**	245	100	**145**	195	170	**245**	440	140	**200**	360	210	**305**	550	180	**760**	1040
	2	25	**70**	110	90	**150**	210	70	**120**	170	120	**195**	340	100	**160**	280	150	**245**	430	275	**365**	500
	3	20	**60**	90	60	**110**	150	50	**85**	120	120	**170**	270	100	**140**	220	150	**210**	335	–	–	–
N	1–2	150	**370**	610	150	**550**	975	120	**440**	780	–	–	–	–	–	–	–	–	–	–	–	–
	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	4	120	**275**	430	120	**365**	610	100	**290**	490	–	–	–	–	–	–	–	–	–	–	–	–
	5	45	**90**	150	90	**170**	245	70	**135**	195	–	–	–	–	–	–	–	–	–	–	–	–
	6	40	**75**	150	120	**210**	305	100	**170**	245	–	–	–	–	–	–	–	–	–	–	–	–
S	1	8	**30**	75	15	**55**	135	8	**40**	60	–	–	–	–	–	–	–	–	–	–	–	–
	2	8	**35**	75	15	**60**	135	8	**30**	75	–	–	–	–	–	–	–	–	–	–	–	–
	3	8	**40**	75	15	**70**	135	15	**40**	75	–	–	–	–	–	–	–	–	–	–	–	–
	4	8	**45**	75	15	**70**	170	8	**50**	110	–	–	–	–	–	–	–	–	–	–	–	–
H	1	–	–	–	30	**45**	60	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	2	–	–	–	15	**30**	45	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Material Group		KT315			KB5625			KB1630			KD1405		
P	0–1	180	**440**	475	–	–	–	–	–	–	–	–	–
	2	195	**270**	400	–	–	–	–	–	–	–	–	–
	3	180	**210**	275	–	–	–	–	–	–	–	–	–
	4	75	**160**	210	–	–	–	–	–	–	–	–	–
	5	150	**250**	310	–	–	–	–	–	–	–	–	–
	6	140	**200**	300	–	–	–	–	–	–	–	–	–
M	1	–	–	–	–	–	–	–	–	–	–	–	–
	2	–	–	–	–	–	–	–	–	–	–	–	–
	3	–	–	–	–	–	–	–	–	–	–	–	–
K	1	60	**275**	550	–	–	–	180	**760**	1040	–	–	–
	2	135	**275**	360	–	–	–	–	–	–	–	–	–
	3	180	**230**	360	–	–	–	–	–	–	–	–	–
N	1–2	–	–	–	–	–	–	–	–	–	365	**610**	1040
	3	–	–	–	–	–	–	–	–	–	275	**480**	800
	4	–	–	–	–	–	–	–	–	–	300	**550**	920
	5	–	–	–	–	–	–	–	–	–	275	**610**	1070
	6	–	–	–	–	–	–	–	–	–	150	**460**	760
S	1	–	–	–	–	–	–	120	**200**	275	–	–	–
	2	–	–	–	–	–	–	120	**215**	275	–	–	–
	3	–	–	–	–	–	–	120	**250**	275	–	–	–
	4	–	–	–	–	–	–	–	–	–	–	–	–
H	1	–	–	–	45	**150**	230	45	**120**	170	–	–	–
	2	–	–	–	45	**140**	230	45	**110**	170	–	–	–
	3	–	–	–	45	**130**	230	45	**100**	170	–	–	–
	4	–	–	–	45	**120**	230	45	**90**	170	–	–	–

NOTE: FIRST choice starting speeds are in **bold** type.
As the average chip thickness increases, the speed should be decreased.

(continued)

TURNING
FIRST CHOICE
MILLING
FIRST CHOICE
HOLEMAKING
FIRST CHOICE
TOOLING SYSTEMS
FIRST CHOICE

(Recommended Starting Speeds — continued)

Recommended Starting Speeds [SFM]

Material Group		K313			KCU10/KC5010			KCU25/KC5025			KCP10			KCP25			KCK20B			KY3500		
P	0–1	–	–	–	450	**925**	1100	360	**740**	880	600	**1320**	1475	475	**925**	1200	660	**1450**	1620	–	–	–
	2	–	–	–	450	**650**	800	360	**520**	640	600	**880**	1150	475	**650**	1000	660	**970**	1260	–	–	–
	3	–	–	–	450	**510**	800	360	**410**	640	550	**630**	850	450	**510**	800	600	**700**	920	–	–	–
	4	–	–	–	250	**360**	550	200	**290**	440	300	**480**	650	250	**360**	600	330	**530**	710	–	–	–
	5	–	–	–	400	**660**	850	320	**530**	680	500	**720**	1000	400	**650**	875	550	**800**	1100	–	–	–
	6	–	–	–	350	**500**	750	280	**400**	600	400	**600**	900	350	**500**	750	440	**660**	990	–	–	–
M	1	200	**300**	400	450	**700**	850	300	**550**	800	–	–	–	–	–	–	–	–	–	–	–	–
	2	150	**250**	350	400	**650**	800	300	**500**	800	–	–	–	–	–	–	–	–	–	–	–	–
	3	120	**220**	320	400	**600**	800	300	**450**	700	–	–	–	–	–	–	–	–	–	–	–	–
K	1	100	**250**	400	400	**600**	800	320	**480**	640	560	**800**	1440	455	**650**	1170	700	**1000**	1800	600	**2500**	3400
	2	75	**225**	350	300	**500**	700	240	**400**	560	400	**640**	1120	325	**520**	910	500	**800**	1400	900	**1200**	1650
	3	65	**190**	300	200	**350**	500	160	**280**	400	400	**560**	880	325	**455**	715	500	**700**	1100	–	–	–
N	1–2	500	**1200**	2000	500	**1800**	3200	400	**1440**	2560	–	–	–	–	–	–	–	–	–	–	–	–
	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	4	400	**900**	1400	400	**1200**	2000	320	**960**	1600	–	–	–	–	–	–	–	–	–	–	–	–
	5	150	**300**	500	300	**550**	800	240	**440**	640	–	–	–	–	–	–	–	–	–	–	–	–
	6	120	**250**	500	400	**700**	1000	320	**560**	800	–	–	–	–	–	–	–	–	–	–	–	–
S	1	25	**100**	250	50	**180**	450	25	**125**	200	–	–	–	–	–	–	–	–	–	–	–	–
	2	25	**110**	250	50	**195**	450	25	**100**	250	–	–	–	–	–	–	–	–	–	–	–	–
	3	25	**125**	250	50	**225**	450	50	**125**	250	–	–	–	–	–	–	–	–	–	–	–	–
	4	25	**150**	250	50	**225**	550	25	**175**	350	–	–	–	–	–	–	–	–	–	–	–	–
H	1	–	–	–	100	**150**	200	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	2	–	–	–	50	**100**	150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Material Group		KT315			KB5625			KB1630			KD1405		
P	0–1	600	**1450**	1600	–	–	–	–	–	–	–	–	–
	2	650	**880**	1300	–	–	–	–	–	–	–	–	–
	3	600	**680**	900	–	–	–	–	–	–	–	–	–
	4	300	**530**	725	–	–	–	–	–	–	–	–	–
	5	500	**800**	1025	–	–	–	–	–	–	–	–	–
	6	475	**660**	975	–	–	–	–	–	–	–	–	–
M	1	–	–	–	–	–	–	–	–	–	–	–	–
	2	–	–	–	–	–	–	–	–	–	–	–	–
	3	–	–	–	–	–	–	–	–	–	–	–	–
K	1	200	**900**	1800	–	–	–	600	**2500**	3400	–	–	–
	2	450	**900**	1200	–	–	–	–	–	–	–	–	–
	3	600	**750**	1200	–	–	–	–	–	–	–	–	–
N	1–2	–	–	–	–	–	–	–	–	–	1200	**2000**	3400
	3	–	–	–	–	–	–	–	–	–	900	**1600**	2600
	4	–	–	–	–	–	–	–	–	–	1000	**1800**	3000
	5	–	–	–	–	–	–	–	–	–	900	**2000**	3500
	6	–	–	–	–	–	–	–	–	–	500	**1500**	2500
S	1	–	–	–	–	–	–	400	**650**	900	–	–	–
	2	–	–	–	–	–	–	400	**700**	900	–	–	–
	3	–	–	–	–	–	–	400	**810**	900	–	–	–
	4	–	–	–	–	–	–	–	–	–	–	–	–
H	1	–	–	–	150	**500**	760	150	**400**	560	–	–	–
	2	–	–	–	150	**460**	760	150	**360**	560	–	–	–
	3	–	–	–	150	**430**	760	150	**330**	560	–	–	–
	4	–	–	–	150	**400**	760	150	**300**	560	–	–	–

NOTE: FIRST choice starting speeds are in **bold** type.
As the average chip thickness increases, the speed should be decreased.