Carbide Grade Selection

Choose the Carmex grade specifically formulated for your application from the following list:

Coated Grades

BLU* (M10-M20) (K05-K20) (N10-N20) (S10-S20)	PVD triple layer coated sub-micron grade for stainless steels, cast iron, titanium, non ferrous metals and most of the high temperature alloys.
BMA (P20-P40) (K20-K30)	PVD TiALN coated sub-micrograin grade for stainless steels and exotic materials at medium to high cutting speeds.
P25C (P15-P35)	PVD TiN coated grade for treated and hard alloy steels (25 HRc & up) at medium to low cutting speeds.
MXC (K10-K20) (P10-P25)	PVD TiN coated micrograin for free cutting untreated alloy steels (below 30 HRc), for stainless steels and cast iron.
BXC* (P30-P50) (K25-K40)	PVD TiN coated grade for low cutting speed. Works well with wide range of stainless steels.

Uncoated Grades

P30* (P20-P30)	Carbide grade for carbon and cast steels, works well at medium to low cutting speeds.
K20* (K10-K30)	Carbide grade for non ferrous metals, aluminum and cast iron.

Note: Due to our unique and specialized production techniques, Carmex coated inserts provide superior cutting performance and exceptionally long tool life.

Recommended cutting speed (ft/min) for thread turning inserts

ISO Standard	Material		Condition	BLU	BMA	P25C	MXC	BXC	K20	P30
P	Non-Alloy Steel and Cast Steel, Free Cutting Steel	<0.25%C	Annealed	361-689	394-590	328-590	328-590	230-492		164-426
		≥0.25%C	Annealed							
		< 0.55%C	Quenched & Tempered							
		≥0.55%C	Annealed							
			Quenched & Tempered							
	Low Alloy Steel and Cast Steel (less than 5% alloying elements)		Annealed	295-459	262-426	230-394	230-394	197-295		164-262
			Quenched & Tempered							
	High Alloy Steel, Cast Steel, and Tool Steel		Annealed	230-295	197-262	164-197	180-230	164-197		131-164
			Quenched & Tempered							
M	Stainless Steel and Cast Steel		Ferritic/Martensitic	328-525	295-426	197-295	197-295	164-262	164-262	
			Martensitic							
			Austenitic							
K	Cast Iron Nodular (GGG)		Ferritic/Pearlitic	394-492	328-426		262-361	197-295		
			Pearlitic							
	Grey Cast Iron (GG)		Ferritic	459-492	394-426		295-328	213-297		
			Pearlitic							
	Malleable Cast Iron		Ferritic	361-459	328-426		262-328	197-279		
			Pearlitic							
N	Aluminum-Wrought Alloy		Not Cureable	2296-3280			1968-2624	1476-1968	1964-2624	1148-1640
			Cured							
	Aluminum-Cast, Alloyed	<=12% Si	Not Cureable	918-2460			565-1804	492-1148	656-1804	361-984
			Cured							
		>12% Si	High Temperature							
	Copper Alloys	>1% Pb	Free Cutting	623-1148			492-820	361-590	492-820	295-492
			Brass							
			Electrolytic Copper							
	Non Metallic		Duroplastics, Fiber Plastics				656-984	492-689	328-656	361-492
			Hard Rubber							
S	High Temp. Alloys, Super Alloys	Fe based	Annealed	98-213	82-197					
			Cured							
		Ni or Co based	Annealed							
			Cured							
			Cast							
	Titanium Alloys		Alpha+Beta Alloys Cured	131-164	115-148				115-148	
H	Hardened Steel		Hardened 45-50 HRc	131-164	115-148					
			Hardened 51-55 HRc							
			Hardened 56-62 HRc							
	Chilled Cast Iron		Cast	98-131	82-115					
	Cast Iron		Hardened	66-98	49-82					

• Available for size 16 mm inserts only
* Upon request
•• For miniature and ultra miniature insert