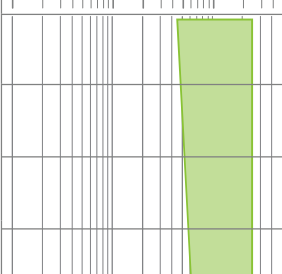
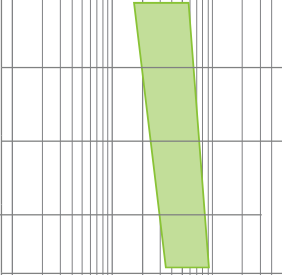
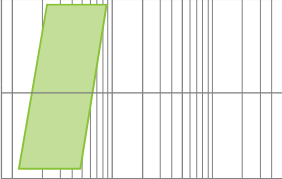
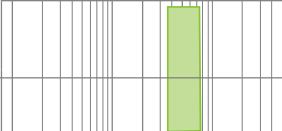
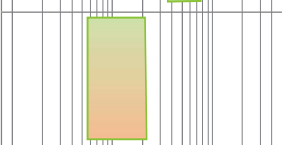
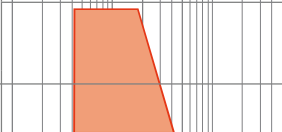
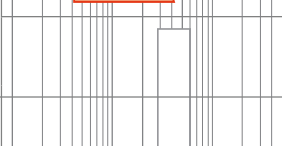
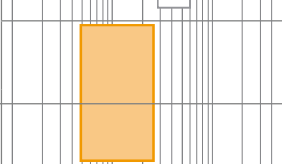


PCD AND CVD APPLICATION GUIDE

SELECTING PRODUCTS & GRADES FOR YOUR APPLICATIONS

PCD / CVD GRADE SELECTION										CUTTING CONDITIONS AND EDGE DESIGN			
			CMX850	CTX002	CTB010	CTH025	CTM302	CDM	CDE	CUTTING SPEED (M/MIN)	FEED, F (MM) FZ (MM/INSERT)	DEPTH OF CUT A _p (MM)	TYPICAL EDGE GEOMETRIES
NON FERROUS METALS HYPOEUTECTIC (SI< 12%) AND EUTECTIC (SI =12%) SILICON ALLOYS		N01									0.1 - 0.4	0.1 - 4.0	F $\alpha = 7-20^\circ$ $\gamma = 0^\circ/+6^\circ$
		N10											
		N20											
		N30											
HYPEREUTECTIC (SI > 12%) ALUMINIUM CASTING ALLOYS METAL MATRIX COMPOSITES (MMC)		N01									0.1 - 0.5	0.1 - 4.0	F/E $\alpha = 7-11^\circ$ $\gamma = 0^\circ/+6^\circ$
		N10											
		N20											
		N30											
CERAMIC MACHINING (GREEN)		UNSINTERED									0.1 - 0.4	0.2 - 1.0	F/E $\alpha = 0-7^\circ$ $\gamma = 0^\circ/-6^\circ$
CERAMIC MACHINING (SINTERED)	SINTERED												
COPPER AND ITS ALLOYS		N01									0.03 - 0.3	0.05 - 2.0	F $\alpha = 7-11^\circ$ $\gamma = 0^\circ/+6^\circ$
MAGNESIUM AND ITS ALLOYS		N30											
BI METALS		N20									0.08 - 0.2	0.25 - 1.0	F/E $\alpha = 7-11^\circ$ $\gamma = 0^\circ/+6^\circ$
GREY & HIGH STRENGTH IRONS		K01									0.08 - 0.2	0.25 - 1.0	F $\alpha = 7-11^\circ$ $\gamma = 0^\circ/+6^\circ$
		K40											
COMPOSITE PLASTICS		01									0.1 - 0.2	0.2 - 3.0	F/E $\alpha = 7-11^\circ$ $\gamma = 0^\circ/+6^\circ$
		20											
TITANIUM		S01									0.1 - 0.2	0.2 - 0.5	F/E $\alpha = 7-11^\circ$ $\gamma = 0^\circ/+6^\circ$
		S30											

Work material characteristics and to a lesser extent, cutting parameters, determine the demands placed on the cutting tool and hence, the optimum balance of tool material properties. Knowledge of the application, including workpiece composition, facilitates selection of the optimum grade and selection of the correct tool geometry. Often, work material composition and machining parameters (vc, f, ap) go hand in hand. It is possible, therefore, only to provide a typical range of values for each parameter.

LEGEND
 F=up-sharp
 E=honed edge

