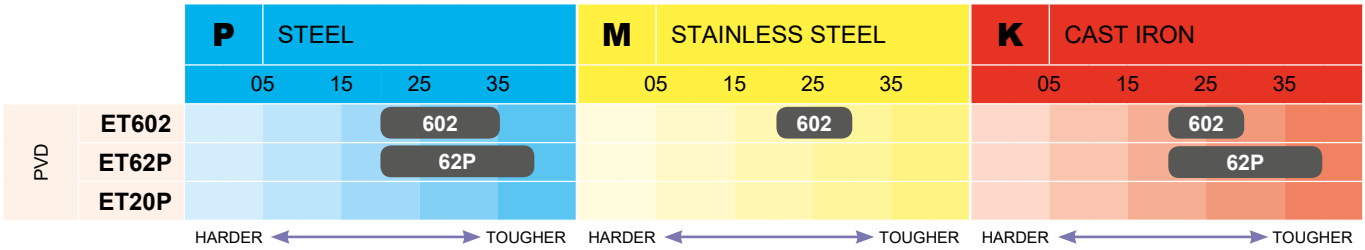
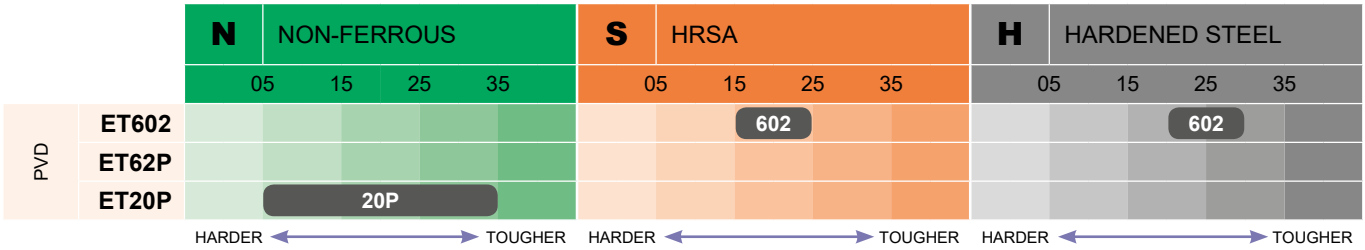
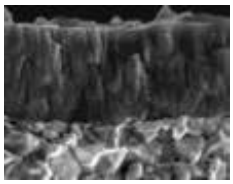
INSERT GRADE GUIDE



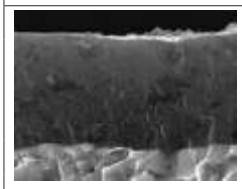




P20 - P35
M20 - M30
K20 - K30
S15 - S25
H20 - H30

ET602
Ultra dense PVD coating with optimal thermal resistance, suitable for most materials.

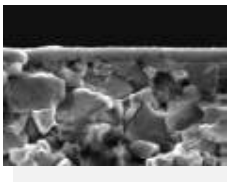
PVD - TiAlN



P20 - P40
K20 - K40

ET62P
Hard coating for tough applications with excellent wear and oxidisation resistance.

PVD - AlCrN

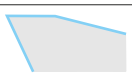
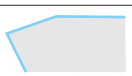


N05 - N35

ET20P
Optimised grade for aluminium with unique CrN based coating.

PVD - CrN

INSERT EDGE PREPARATION GUIDE

P	M	K	N	S	H	Edge Preparation Guide		
●	●	●					Standard Edge Preparation	General machining, first choice
			●				**AL**	Very sharp geometry for Aluminium
	●			●			**MS**	Sharp geometry for Stainless Steel and HRSA
●		●			●		**HC**	Reinforced geometry for Hardened Steels
●		●			●		**...W/...N**	Flat insert for Hardened Material and Cast Iron

TERMINOLOGY

n = Spindle speed in RPM
v_c = Cutting speed in m/min
v_f = Table feed rate in mm/min
z_n = Number of teeth/flutes
a_p = Axial depth of cut in mm
a_e = Radial depth of cut in mm
D_c = Cutter body diameter in mm
k_c = Specific cutting force in N/mm^2
P_c = Power consumption in kW

USEFUL FORMULAE

SPINDLE SPEED (n)	CUTTING SPEED (v_c)	TABLE FEED RATE (v_f)
$n = \frac{v_c \times 1000}{\pi \times D_c}$ (rev/min)	$v_c = \frac{D_c \times \pi \times n}{1000}$ (m/min)	$v_f = f_z \times z_n \times n$ (mm/min)

FEED PER TOOTH (f_z)	POWER CONSUMPTION (P_c)	METAL REMOVAL RATE (Q)
$f_z = \frac{v_f}{n \times z_n}$ (mm)	$P_c = \frac{a_p \times a_e \times v_f \times k_c}{60 \times 10^6}$ (kW)	$Q = \frac{a_p \times a_e \times v_f}{1000}$ (cm^3/min)