CEMENTED CARBIDE

● **The grades available are UTi20T for steel and cast iron, and HTi10 for cast iron, non-ferrous metal and non-metal.**

SELECTION STANDARD

MILLING

Work Material		Recommended Grade	Recommended Cutting Speed (m/min)	ISO	Application Range
P	Steel	**UTi20T**	120 (50 — 180)	P10	UTi20T
				P20	
				P30	
M	Stainless Steel	**UTi20T**	120 (50 — 180)	M10	UTi20T
				M20	
				M30	
K	Cast Iron	**HTi10**	100 (50 — 150)	K10	HTi10
				K20	
		UTi20T	120 (50 — 180)	K30	UTi20T
N	Non-Ferrous Metal	**HTi10** **TF15**	400 (300 — 500)	N01	HTi10
				N10	
				N20	TF15
				N30	

MAIN COMPONENT AND APPLICATION

P series for steel cutting, K series for cast iron cutting and M series for general cutting.

ISO	Main Component	Characteristics	Work Material
P M	WC-TiC-TaC-Co	Heat / Deformation resistance.	Carbon steel, Alloy steel, Stainless steel and Cast iron
K N	WC-Co	High rigidity and wear resistance.	Cast iron, Non-Ferrous metals and Non-metal

GRADE CHARACTERISTICS

ISO	Grade	Hardness (HRA)	Thermal Conductivity (W/m•K) *	Thermal Expansion ($x10^{-6}$/K)	Young's Modulus (GPa) *	T.R.S (GPa) *
P M	**UTi20T**	90.5	38	5.5	520	2.0
K N	**HTi05T**	92.5	79	4.5	600	1.5
K N	**HTi10**	92.0	79	4.6	630	2.0
N	**TF15**	91.5	71	5.3	580	2.5

*1GPa=102kg/mm^2, 1W/m • K=2.39×10^{-3}cal/cm • sec • ℃