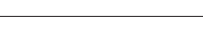
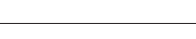
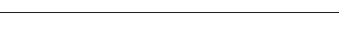


END MILLS SELECTION CHART

Group	Type	Feature	Flutes	Code	Shape	Coating	Substrate	Size range	Work material										Page number	
									P	H	M	S	N	Graphite	Dimensions	Cutting conditions				
									Carbon steel, Alloy steel, Cast iron	Tool steel, Pre-Hardened steel, Hardened steel	Hardened steel(—55HRC)	Hardened steel(55HRC—)	Austenitic stainless steel				Titanium alloy, Heat resistant alloy	Copper alloy	Aluminium alloy	
IMPACT MIRACLE / For Stainless steel, Titanium alloy																				
SOLID END MILLS	Ball	Wide ball	2	VF2WB		VF	UWC	R1—R3	○	○	○		○	○				I168	I168	
				VF45VB		VF	UWC	R1—R10	○	○			○	○				I189	I190	
	Square	Variable helix	4	VFMHV		VF	UWC	φ2—φ20	○	○	○		○	○				I152	I153	
				VFJHV		VF	UWC	φ2—φ20	○	○	○		○	○				I155	I156	
			6	VF6MHV		VF	UWC	φ6—φ20					○	○				I157	I157	
				VF6MHVCH		VF	UWC	φ16φ20					○	○				I154	I154	
		Through coolant	6	VF6MHVCH		VF	UWC	φ10—φ20					○	○				I158	I158	
			8	VF8MHVCH		VF	UWC	φ16φ20					○	○				I159	I159	
	Radius	Variable helix	4	VFMHVRB		VF	UWC	φ6—φ20	○	○	○		○	○				I201	I202	
			6	VF6MHVRB		VF	UWC	φ6—φ20	○	○	○		○	○				I204	I205	
		Through coolant	4	VFMHVRBCH		VF	UWC	φ16φ20					○	○				I203	I203	
			6	VF6MHVRBCH		VF	UWC	φ10—φ20					○	○				I206	I206	
			8	VF8MHVRBCH		VF	UWC	φ16φ20					○	○				I207	I207	
	Roughing	General	3 4	VF5FPR		VF	UWC	φ3—φ20	○	○	○		○	○				I163	I164	
			4	VFMFPR		VF	UWC	φ5—φ20	○	○	○		○	○				I167	I167	